ATTACHMENT 11

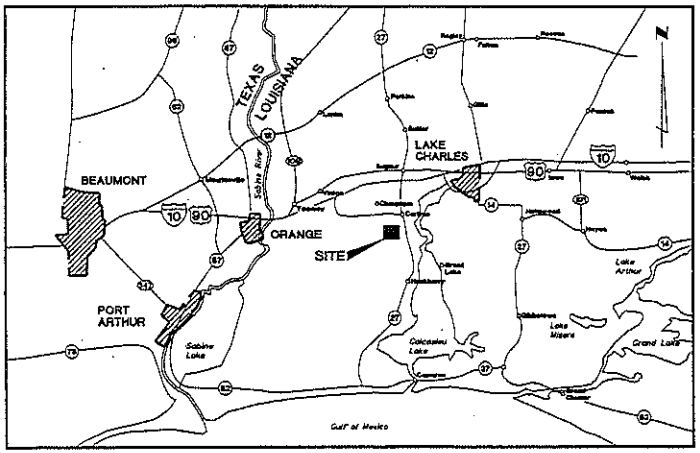
APPROVED DESIGN DRAWINGS FOR CELLS 6 AND 7

Chemical Waste Management, Inc.

Lake Charles Facility

Lake Charles, Louisiana

000591



SITE LOCATION MAP

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8.	DOWNSLOPE CHANNEL DETAILS	792

Plans Prepared by:
Golder Associates
Houston, Texas

STATE OF LOUISIANA
11-2-95
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

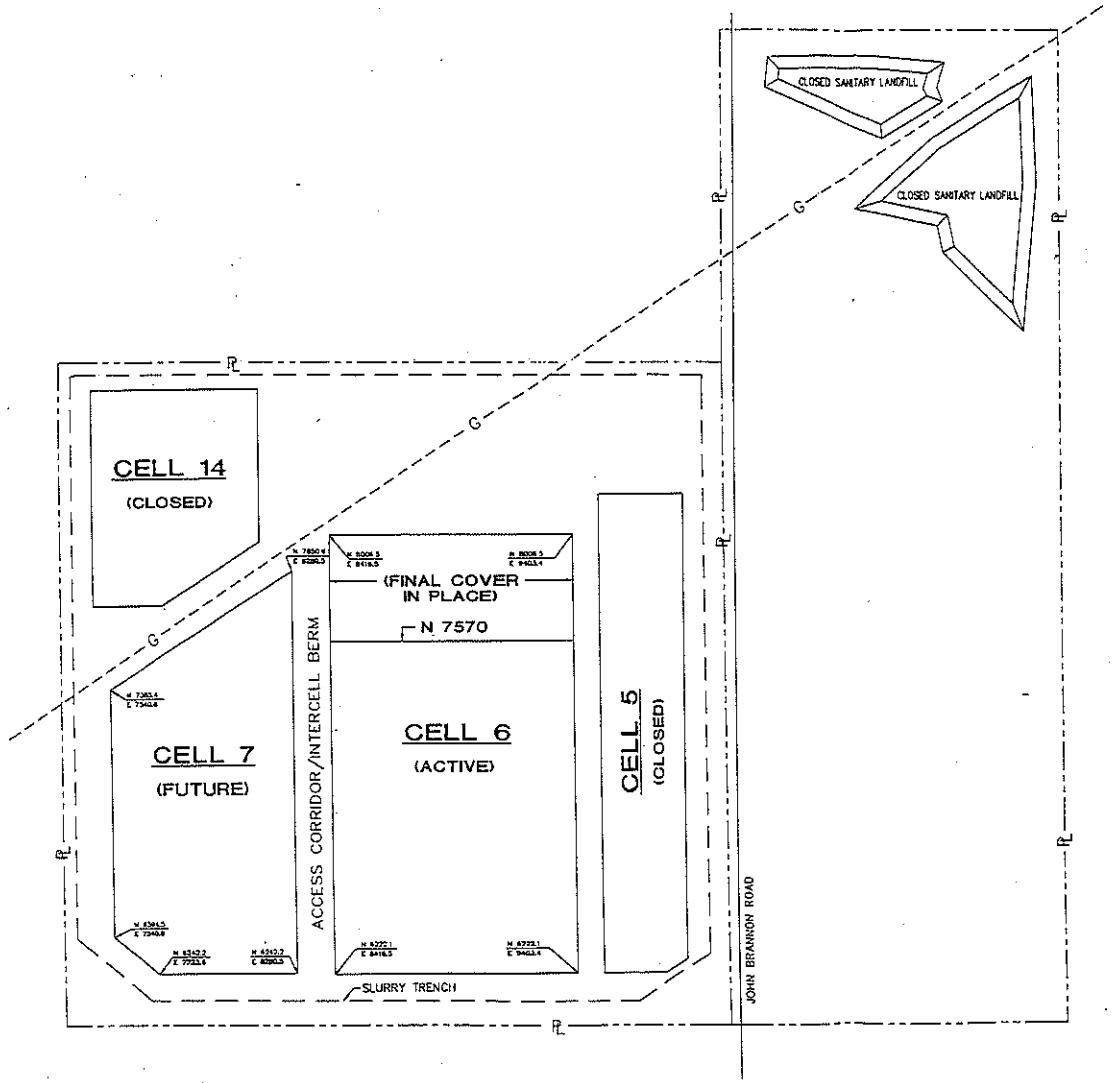
NOVEMBER 1995

933-4177

CONCEPTUAL DESIGN FOR CELL 6 VERTICAL EXPANSION EPA I.D. NUMBER: LAD000777201

SHEET NO. 1 OF 8
DRAWING NO. 785

000592

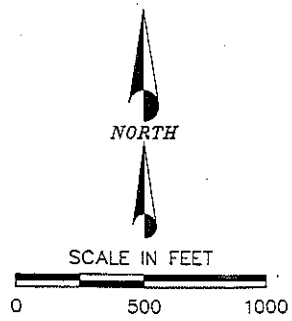


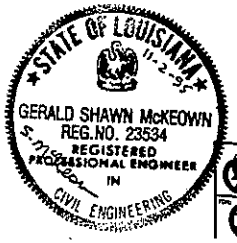
LEGEND

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

NOTES

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
3. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
4. THE SLURRY TRENCH IS SHOWN ALIGNED FROM COORDINATES (N 8636, E 7412), (N 8625, E 9920), (N 8597, E 9919), (N 6310, E 9930), (N 6125, E 9640), (N 6140, E 7690), (N 6390, E 7390), AND (N 8631, E 7392).
5. THE PROPERTY LINES ARE SHOWN ALIGNED FROM COORDINATES (N 8686.006, E 7342.28), (N 6043.488, E 7338.224), (N 6025.753, E 10,009.335), (N 8674.346, E 9999.124), (N 10,000.376, E 9999.124), (N 10,000.473, E 11,341.634) AND (N 6029.485, E 11,354.705).





Golder Associates Houston, Texas

Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

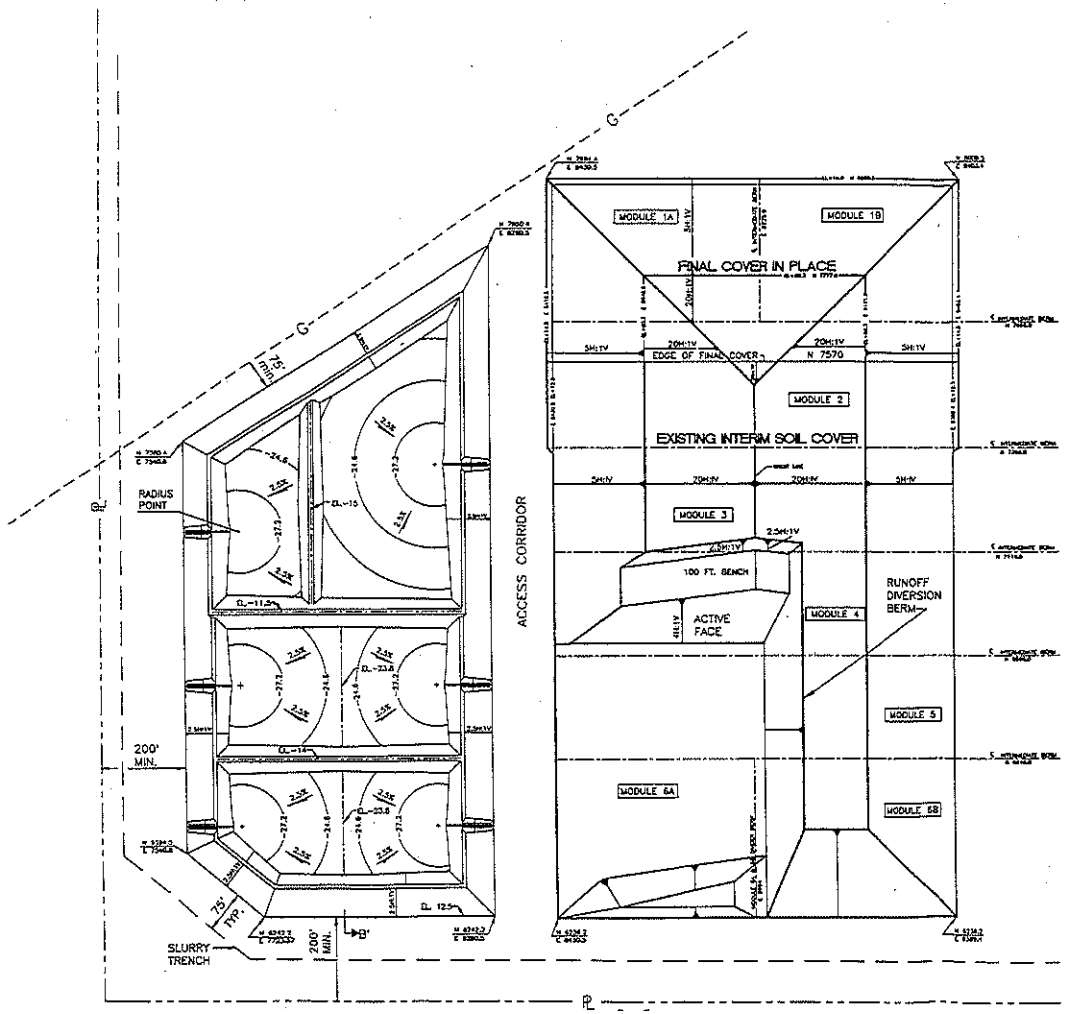
LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CONCEPTUAL DESIGN FOR
CELL 6 VERTICAL EXPANSION
SITE LAYOUT PLAN

DRAWN	DR	DATE	NOVEMBER 1995
CHECKED	PP	SCALE	AS SHOWN
APPROVED		FILE NO.	744

JOB NO. 933-4177
REV. NO. 744
FIGURE NO. 2

000593



CELL 7 (FUTURE) CELL 6

LEGEND

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH
- RADIUS POINTS (CELL 7)
- MODULE BOUNDARY

NOTES

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. CELL 6 IS IN USE. LINES AND ELEVATIONS SHOWN FOR CELL 6 ARE INDICATIVE OF CONDITIONS IN FALL 1995.
5. CELL 7 IS BEING EXCAVATED. ELEVATIONS AND CONTOURS SHOWN IN CELL 7 ARE APPROXIMATE DESIGN GRADES. RADIUS POINTS ARE AT EL. -29.65.
6. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 8125, E 9640), (N 8140, E 7690), AND (N 8631, E 7392).
7. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

NORTH

SCALE IN FEET

0 300 600

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
11-2-95

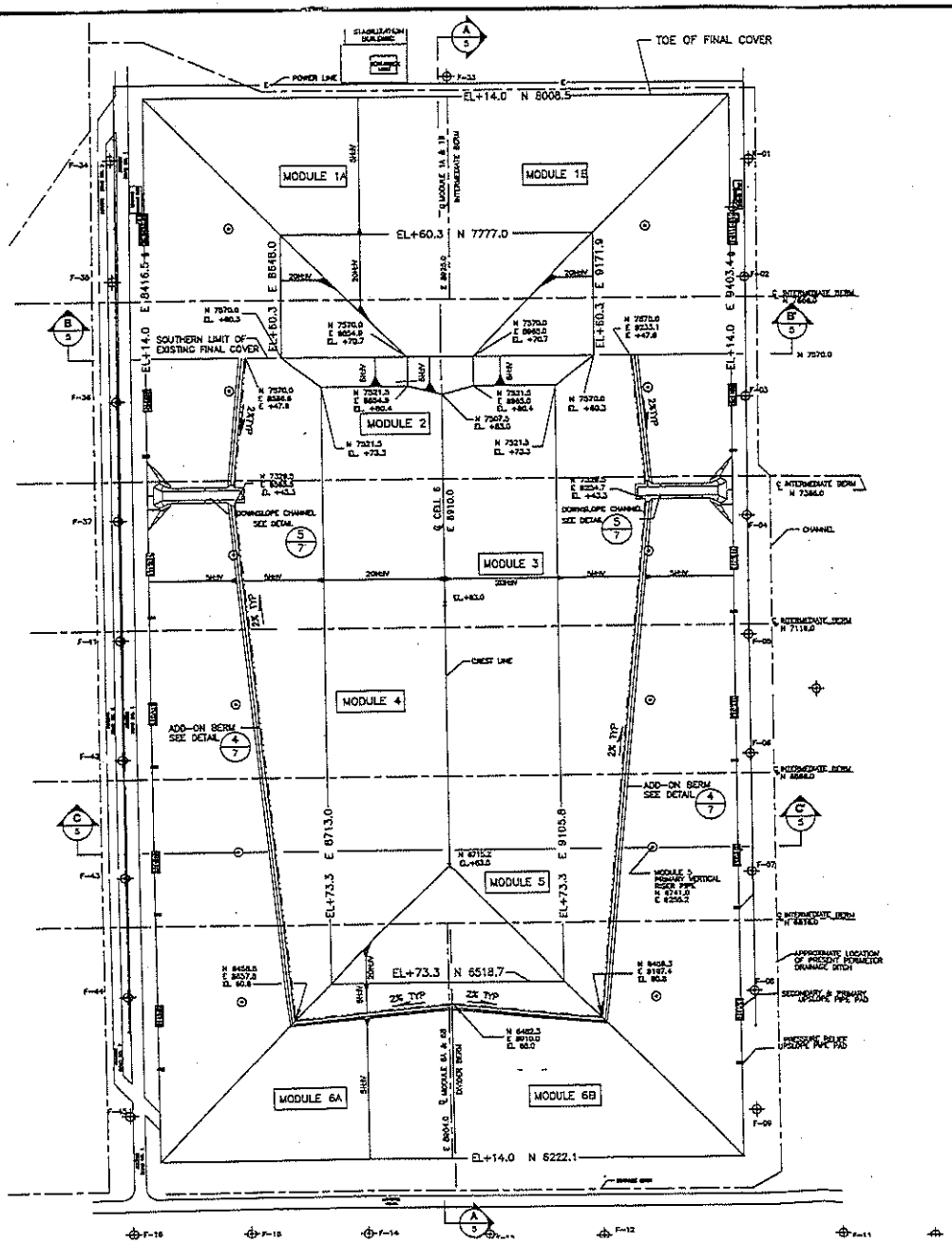
Golder Associates Houston, Texas

Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CONCEPTUAL DESIGN FOR CELL 6 VERTICAL EXPANSION LANDFILL DEVELOPMENT PLAN

DR	DATE	JOB NO.
	NOVEMBER 1995	933-4177
CHECKED	SCALE	DWG. NO.
	AS SHOWN	787



LEGEND

- F-07 MONITORING WELL
- PERIMETER STORMWATER DRAINAGE DITCH
- POWER POLES/LINES
- ADD-ON BERM FLOWLINE
- SECONDARY & PRIMARY UPSLOPE PIPE PAD
- PRESSURE RELIEF UPSLOPE PIPE PAD
- PRIMARY VERTICAL RISER PIPE

NOTES

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. THE ELEVATIONS SHOWN REPRESENT THE UPPERMOST SURFACE OF THE FINAL COVER VEGETATIVE GROWTH MEDIA.
5. THE TOP 5 FEET OF WASTE SHALL CONSIST OF SELECT MATERIAL FREE OF DRUMS, TRANSFORMERS, ETC. TO MINIMIZE SETTLEMENT OF THE FINAL COVER DUE TO VOIDS IN THE WASTE.

NORTH

SCALE IN FEET
0 50 100 200

STATE OF LOUISIANA
11-2-95
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Golder Associates Houston, Texas

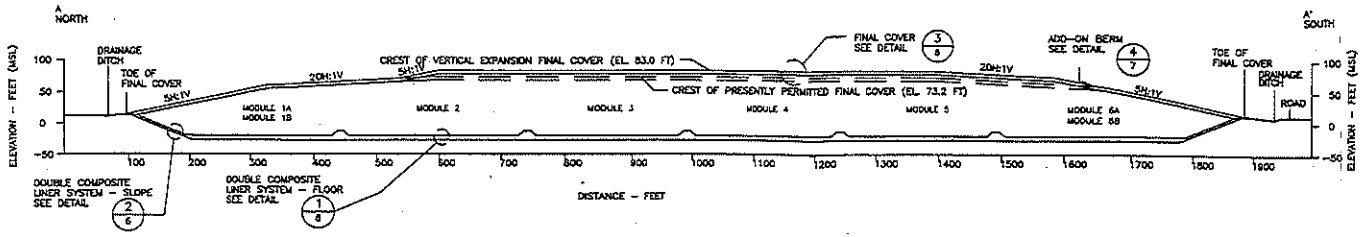
Chemical Waste Management, Inc. Oak Brook, Illinois 60521

LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

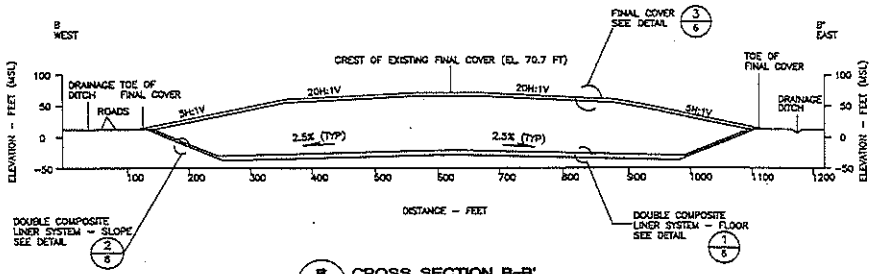
CONCEPTUAL DESIGN FOR CELL 6 VERTICAL EXPANSION FINAL COVER GRADES PLAN

DRAWN	DR	DATE	NOVEMBER, 1995
JOB NO.	933-4177	CHECKED	RD
SCALE	AS SHOWN	DWG NO.	755

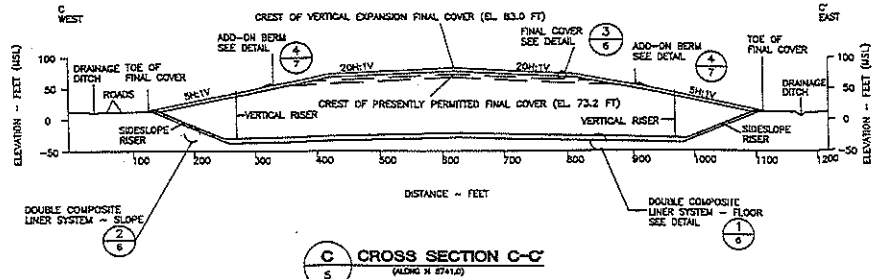
000595



A/5 CROSS SECTION A-A'
(ALONG E 9910.0)
SCALE IN FEET 0 50 100 200



B/5 CROSS SECTION B-B'
(ALONG N 7570.0)
SCALE IN FEET 0 50 100 200



C/5 CROSS SECTION C-C'
(ALONG N 8741.0)
SCALE IN FEET 0 50 100 200

NOTES

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
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REGISTERED PROFESSIONAL ENGINEER
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CIVIL ENGINEERING
11-2-95

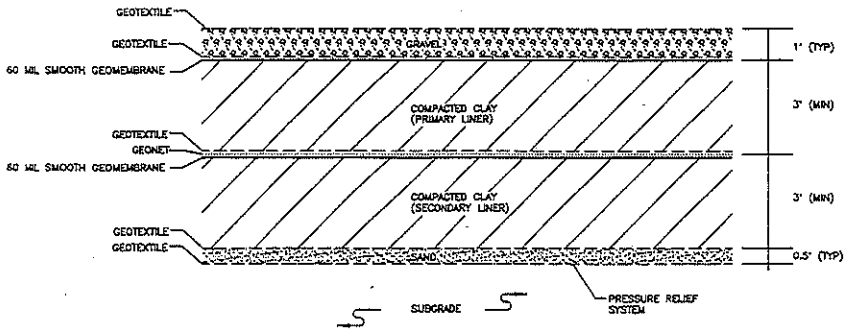
Golder Associates Houston, Texas
Chemical Waste Management, Inc. Oak Brook, Illinois 60521

LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

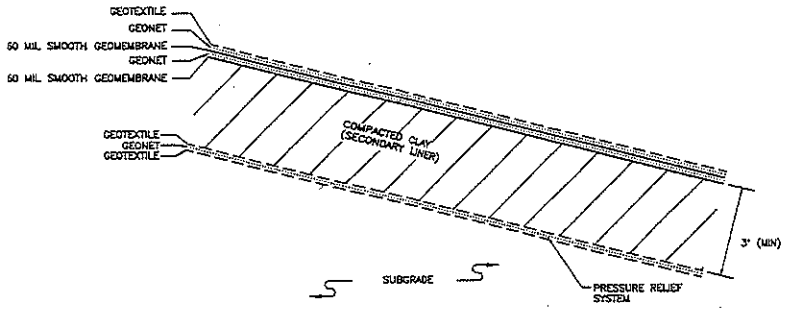
CONCEPTUAL DESIGN FOR CELL 6 VERTICAL EXPANSION FINAL COVER CROSS SECTIONS

DRAWN	DR	DATE	NOVEMBER 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	789

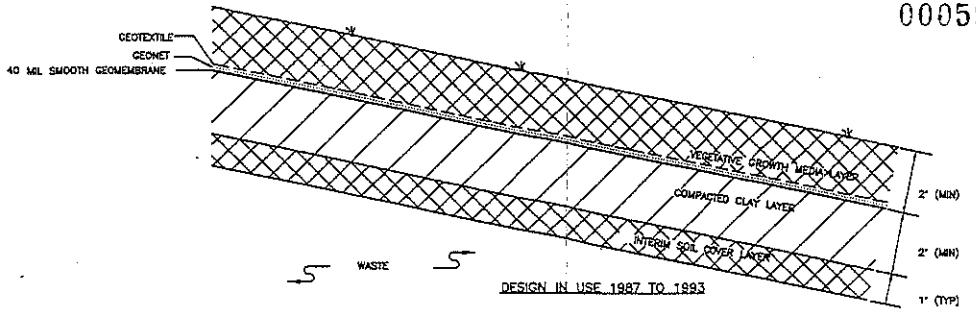
000596



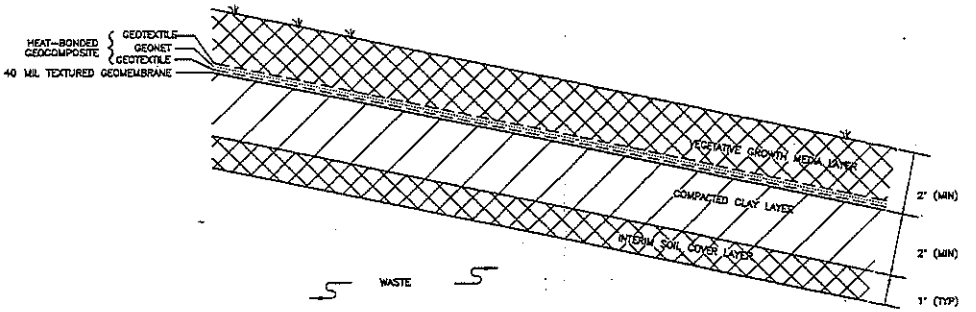
1/6 DOUBLE COMPOSITE LINER SYSTEM - FLOOR
NOT TO SCALE



2/6 DOUBLE COMPOSITE LINER SYSTEM - SIDESLOPE
NOT TO SCALE



DESIGN IN USE 1987 TO 1993



DESIGN IN USE 1993 TO PRESENT

3/6 FINAL COVER DETAILS
NOT TO SCALE

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
3. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.

STATE OF LOUISIANA
11-2-95
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IN
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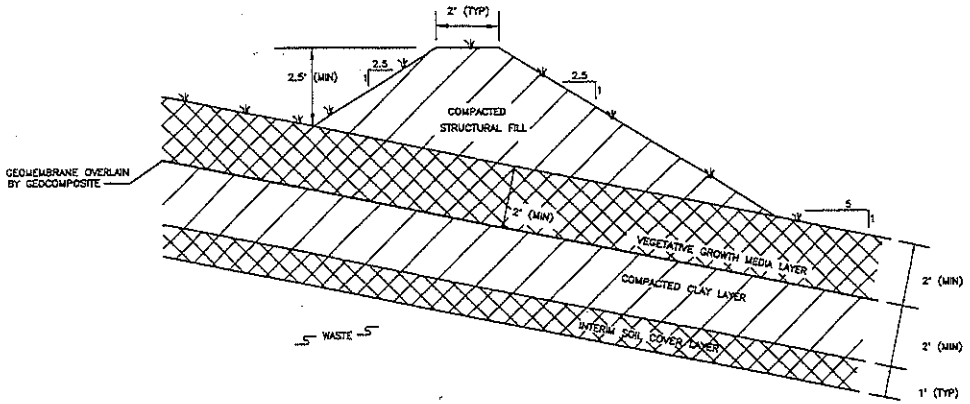
Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

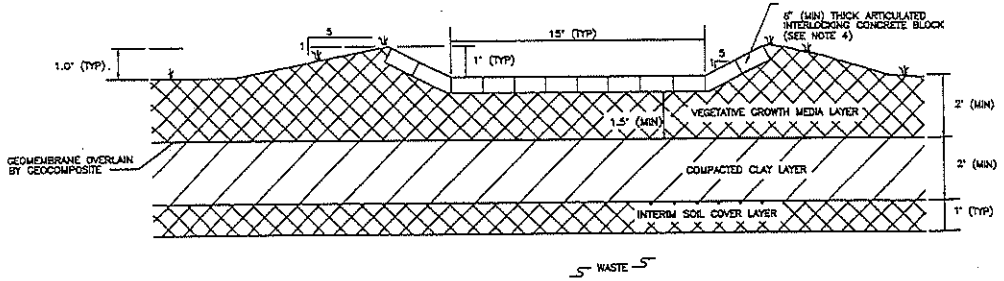
CONCEPTUAL DESIGN FOR
CELL 6 VERTICAL EXPANSION
COVER AND LINER SYSTEM DETAILS

DRAWN	DR	DATE NOVEMBER 1995	JOB NO. 933-4177
CHECKED		SCALE AS SHOWN	DWG. NO. 790
REVISED			

000597



4/7 ADD-ON BERM - CROSS SECTION
NOT TO SCALE



5/7 DOWNSLOPE CHANNEL - CROSS SECTION
NOT TO SCALE

NOTES

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
3. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
4. THE INTERLOCKING ARTICULATED CONCRETE BLOCKS ARE TO BE MANUFACTURED BY TRI-LOCK OR ENGINEER APPROVED EQUAL. THE BLOCKS SHALL BE PLACED OVER A GEOTEXTILE APPROVED BY THE MANUFACTURER.

STATE OF LOUISIANA
11-2-95
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REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

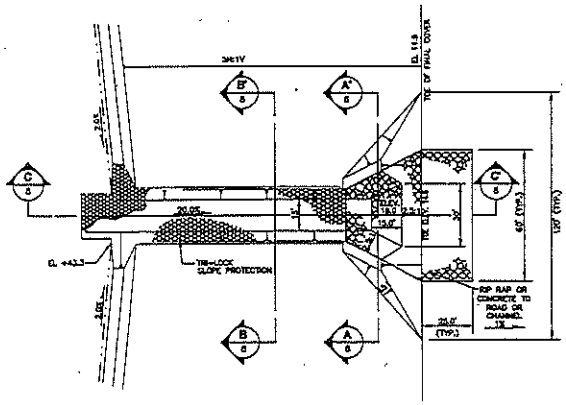
LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CONCEPTUAL DESIGN FOR CELL 6 VERTICAL EXPANSION SURFACE WATER CONTROL DETAILS

DRAWN	DR	DATE	NOVEMBER 1995
CHECKED	RD	SCALE	AS SHOWN
REVISED	SMJ	FILE NO.	701

JOB NO. 933-4172
DWG. NO. 701
FIGURE NO. 7

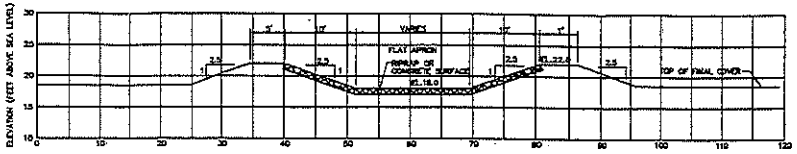
000593



TYPICAL DOWNSLOPE CHANNEL

SCALE IN FEET

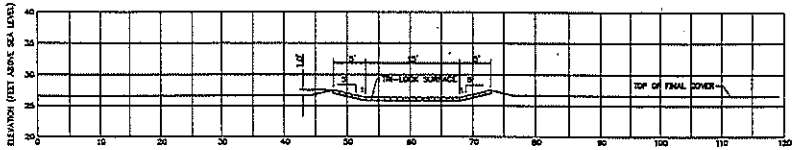
30 15 0 30



A/8 SECTION A–A'

SCALE IN FEET

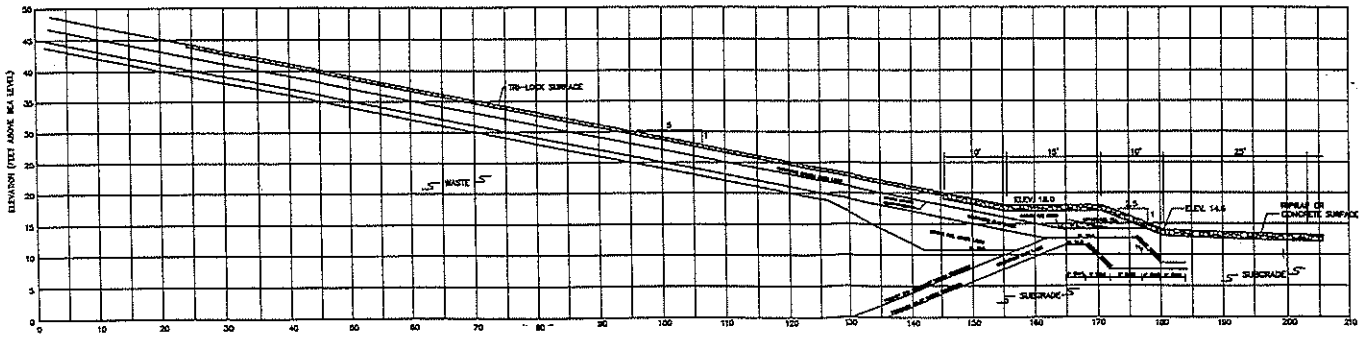
10 5 0 10



B/8 SECTION B–B'

SCALE IN FEET

10 5 0 10



C/8 SECTION C–C'

SCALE IN FEET

10 5 0 10

STATE OF LOUISIANA
11-2-95
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NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, QUANTITIES, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
3. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.

Golder Associates Houston, Texas

Chemical Waste Management, Inc. Oak Brook, Illinois 60521

LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CONCEPTUAL DESIGN FOR CELL 6 VERTICAL EXPANSION DOWNSLOPE CHANNEL DETAILS

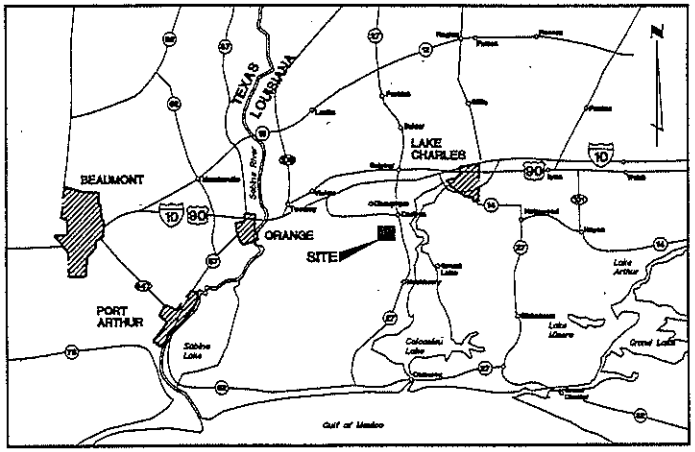
DRAWN	DR	DATE	NOVEMBER 1995
CHECKED	KP	SCALE	AS SHOWN
PROJECT NO.	933-4177	DWG. NO.	792

000599

Chemical Waste Management, Inc.

Lake Charles Facility

Lake Charles, Louisiana



SITE LOCATION MAP

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STATE OF LOUISIANA
GERALD SHAWN McKEOWN
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CIVIL ENGINEERING
2-17-95

Plans Prepared by:
Golder Associates
Houston, Texas

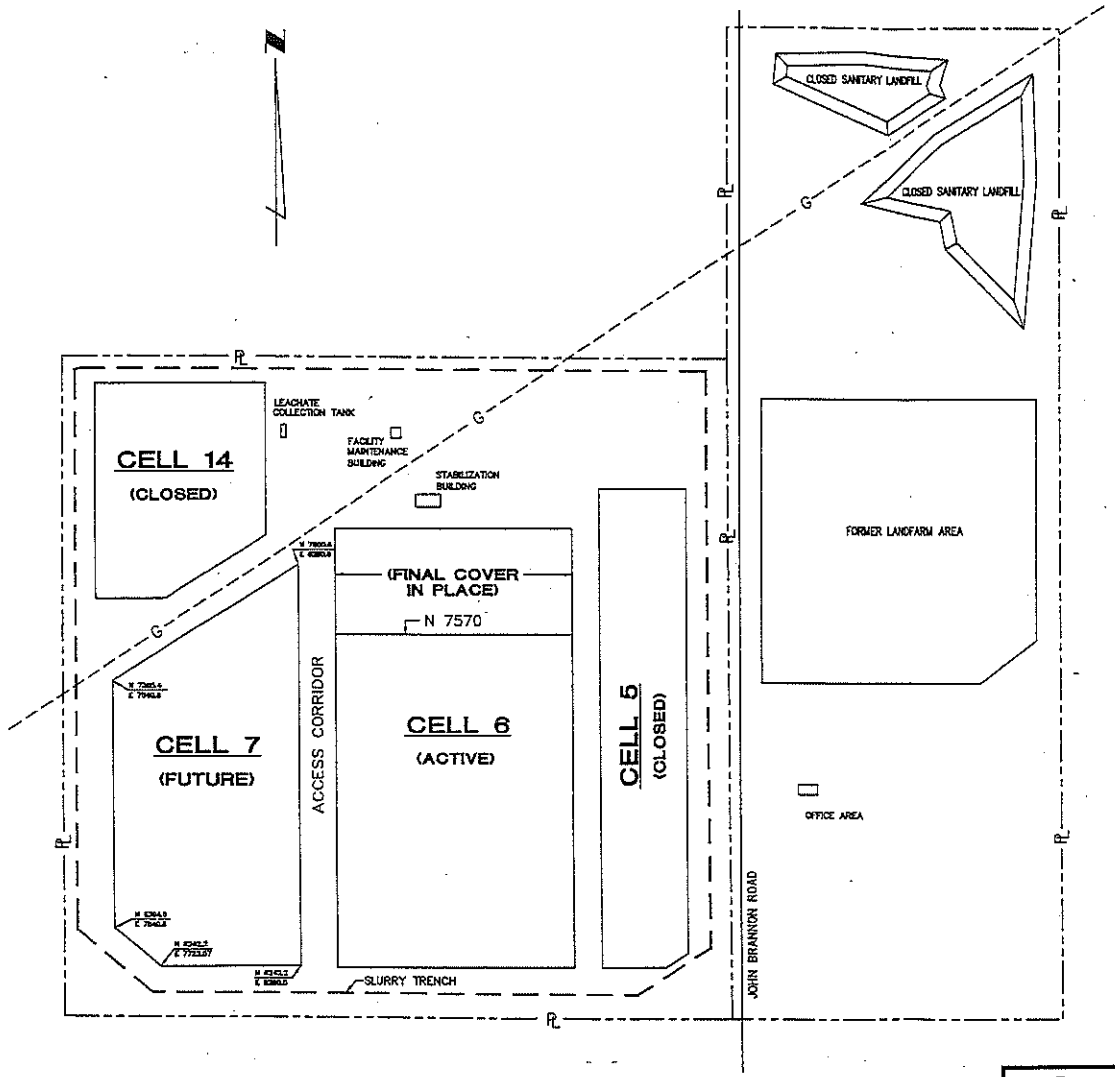
JANUARY 1995

933-4177

CELL 7 CONCEPTUAL DESIGN DRAWINGS

EPA I.D. NUMBER: LAD000777201

000600



SCALE IN FEET

0 500 1000

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
3. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
4. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 8636, E 7412), (N 8625, E 9920), (N 8597, E 9919), (N 6310, E 9930), (N 6125, E 9640), (N 6140, E 7690), (N 6390, E 7390), AND (N 8631, E 7392).
5. THE PROPERTY LINES ARE CONSTRUCTED FROM COORDINATES (N 8686.005, E 7342.28), (N 5043.468, E 7338.224), (N 6025.753, E 10,009.335), (N 8674.345, E 9998.124), (N 10,000.376, E 9999.124), (N 10,000.473, E 11,341.634) AND (N 6029.485, E 11,354.705).

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23534
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
2-17-95

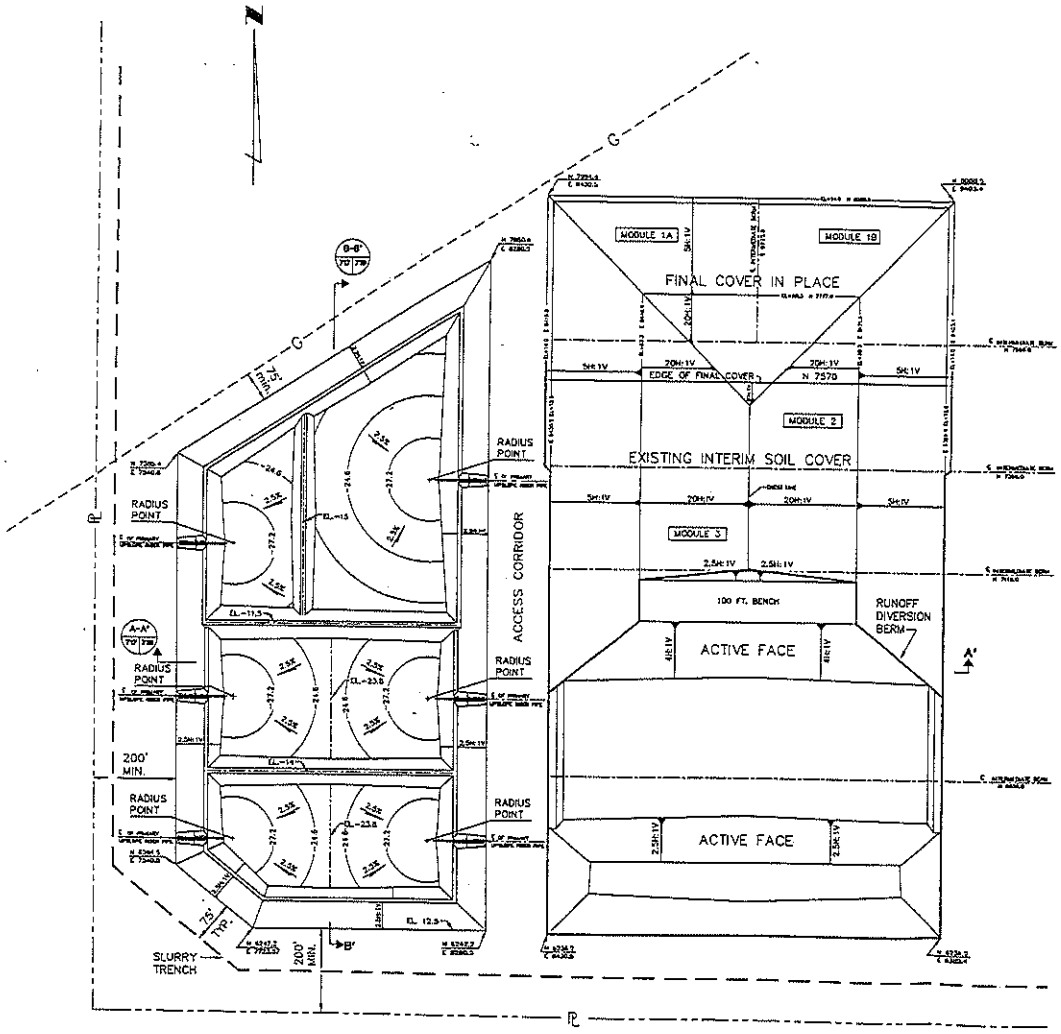
Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER: LAD000777201

CELL 7
SITE LAYOUT PLAN

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	716
REVIEWED	SMJ	FILE NO.	853-3197	FIGURE NO.	2



CELL 7 CELL 6

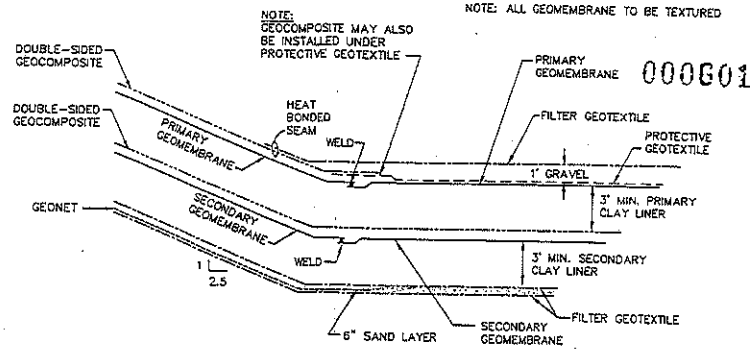
LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET

0 300 600

NOTE: ALL GEOMEMBRANE TO BE TEXTURED



000601

TYPICAL MODULE FLOOR SCHEMATIC

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE LANDFILL DEVELOPMENT PLAN.
5. RADIUS CONTROL POINTS ON THIS SHEEET ARE AT EL. -29.65.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

STATE OF LOUISIANA
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CIVIL ENGINEERING
2-17-95

Golder Associates Houston, Texas

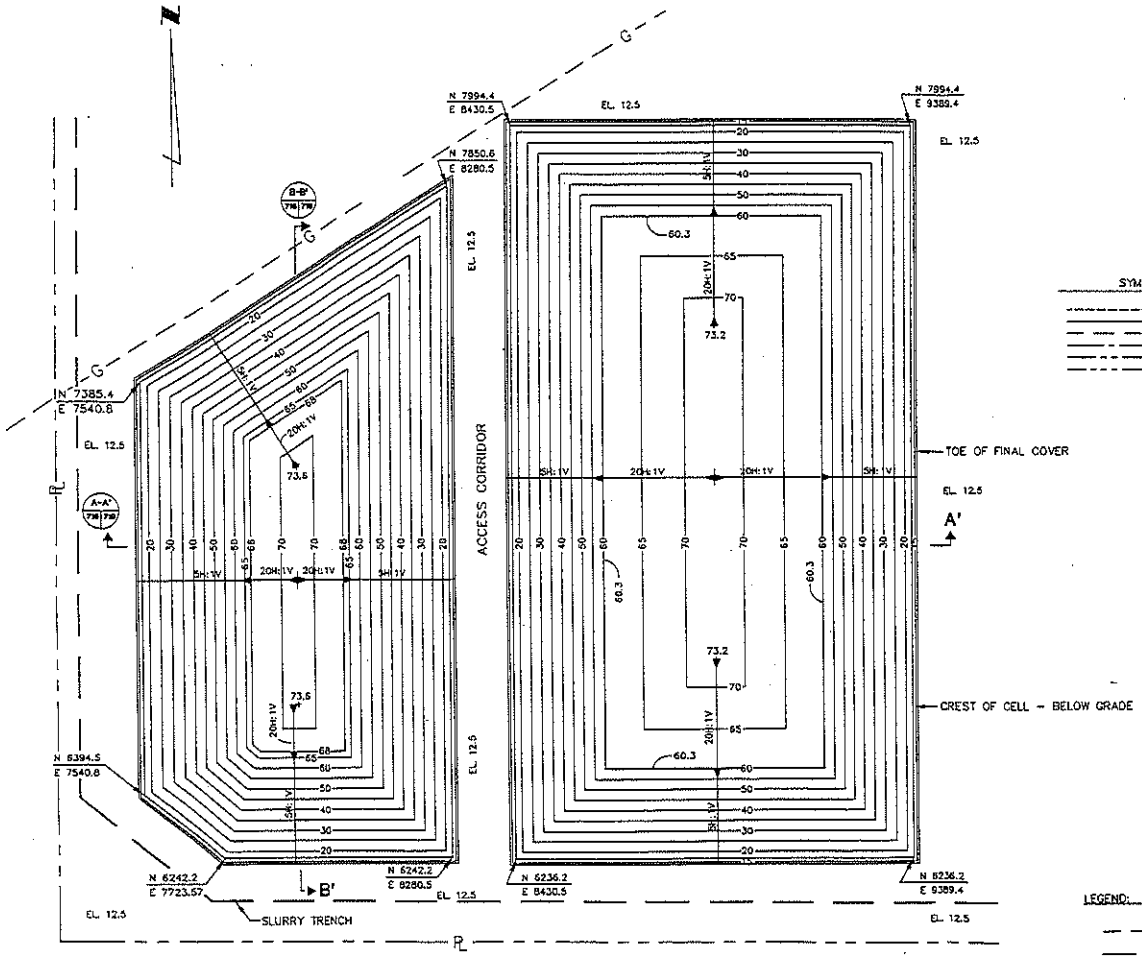
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

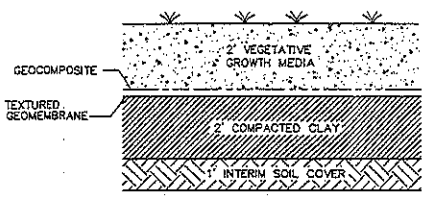
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7 LANDFILL DEVELOPMENT PLAN

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	717
REVIEWED	SM	FILE NO.	853-3197	FIGURE NO.	8

000602





TYPICAL COVER DETAIL

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THE ELEVATIONS SHOWN REPRESENT THE UPPERMOST SURFACE OF THE FINAL COVER GROWTH MEDIA LAYER.
3. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
4. SEE SHEET 5 FOR CROSS SECTIONS.
5. TOP 5' OF WASTE SHALL CONSIST OF SELECT MATERIAL FREE OF DRUMS, TRANSFORMERS, ETC. TO MINIMIZE SETTLEMENT OF THE FINAL COVER DUE TO VOIDS IN THE WASTE.
6. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
7. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).
8. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 8125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

CELL 7

CELL 6

SCALE IN FEET

0 300 600

STATE OF LOUISIANA
2-17-95
DONALD SHAWN McKEOWN
REG. NO. 28534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

Golder Associates Houston, Texas

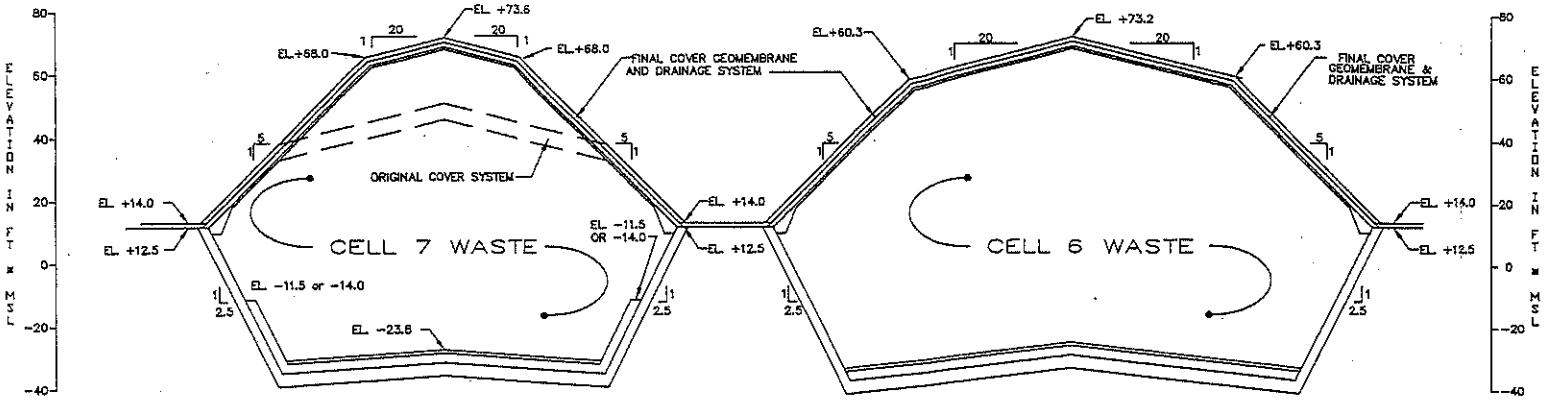
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
FINAL COVER GRADING PLAN

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	718
REVIEWED	SMY	FILE NO.	853-3197	FIGURE NO.	4

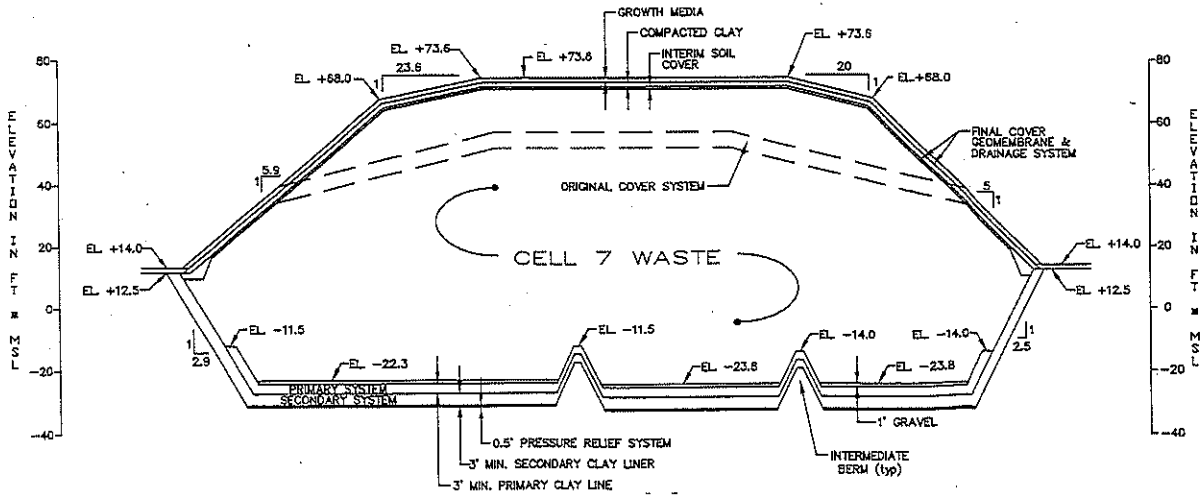
000603



A-A' 717 | 719 / A-A' 718 | 719

SECTION

HORIZONTAL SCALE IN FEET
0 100 200 300 400
VERTICAL SCALE EXAGGERATED 5x



B-B' 717 | 719 / B-B' 718 | 719

SECTION

HORIZONTAL SCALE IN FEET
0 100 200 300 400
VERTICAL SCALE EXAGGERATED 5x

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
2. THE ELEVATIONS SHOWN REPRESENT THE UPPERMOST SURFACE OF THE FINAL COVER GROWTH MEDIA LAYER.
3. THESE CROSS SECTIONS ARE CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
4. SEE SHEETS 3 AND 4 FOR THE BELOW AND ABOVE GRADE CROSS SECTION LOCATIONS RESPECTIVELY.
5. TOP 5' OF WASTE SHALL CONSIST OF SELECT MATERIAL FREE OF DRUMS, TRANSFORMERS, ETC. TO MINIMIZE SETTLEMENT OF THE FINAL COVER DUE TO VOIDS IN THE WASTE.
6. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.

STATE OF LOUISIANA
2-17-95
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

Golder Associates Houston, Texas

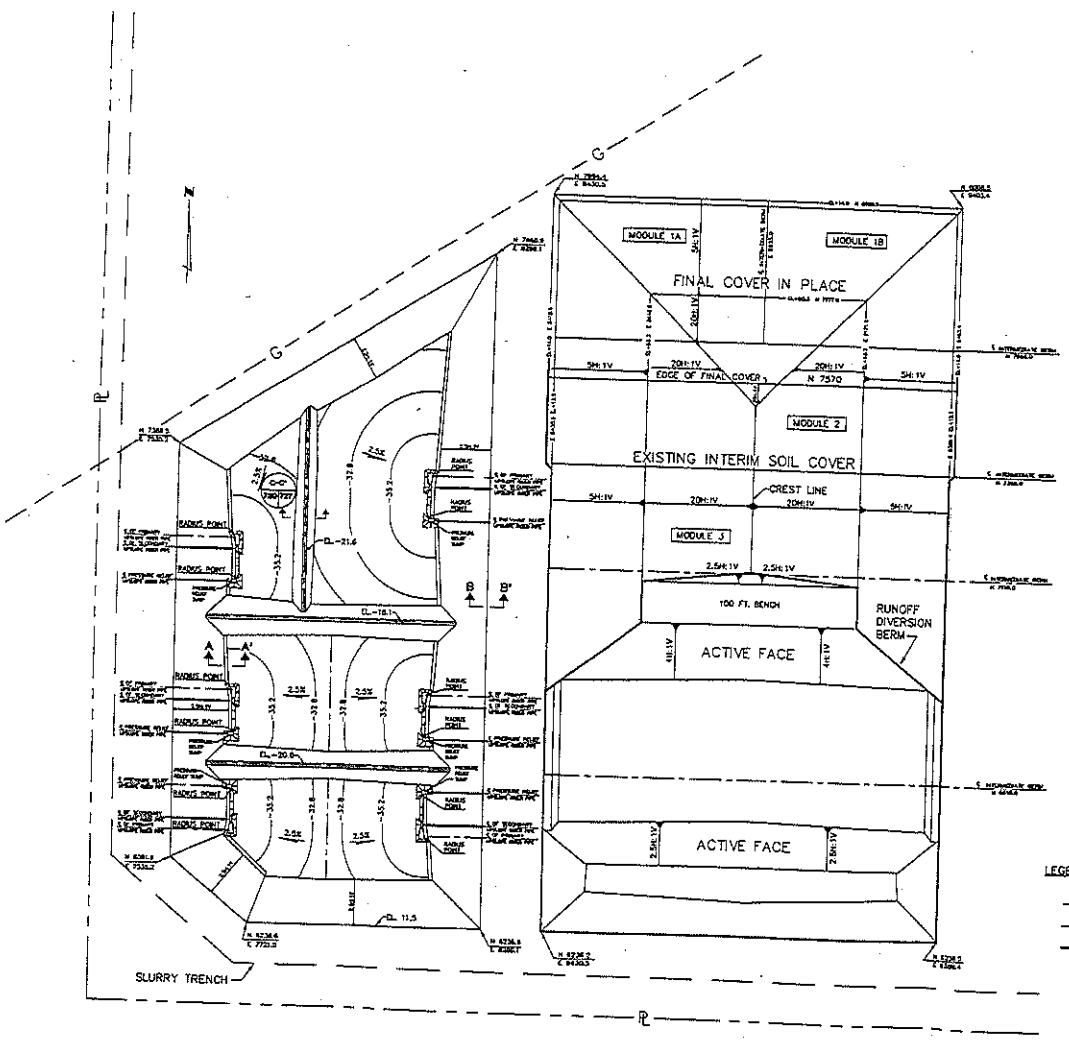
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
LANDFILL DEVELOPMENT AND FINAL COVER CROSS SECTIONS

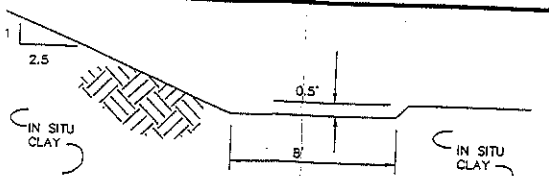
DRAWN dhg	DATE: JANUARY 1995	JOB NO. 933-4177	
CHECKED RP	SCALE: AS SHOWN	DWG. NO. 719	
REVIEWED SMY	FILE NO. 853-3197	FIGURE NO. 5	

000604



SCALE IN FEET

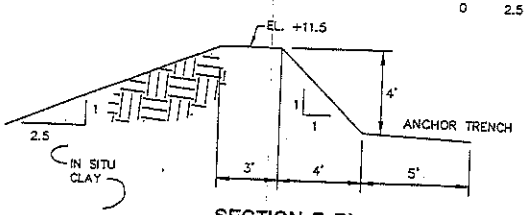
0 300 600



SECTION A-A'

SCALE IN FEET

0 2.5 5 10



SECTION B-B'

STATE OF LOUISIANA
2-17-95
GERALD SHAWN McKEOWN
REG. NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE BASE OF EXCAVATION.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -37.75.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

Golder Associates Houston, Texas

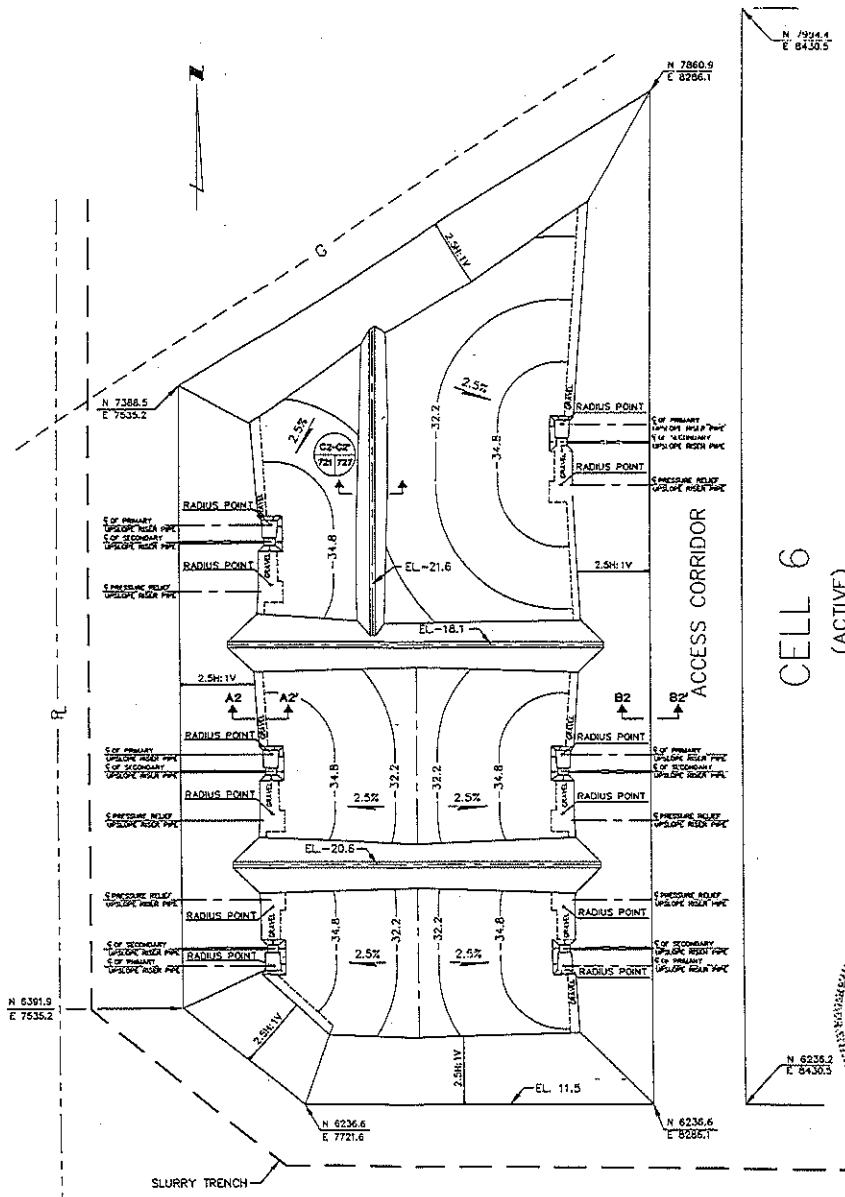
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

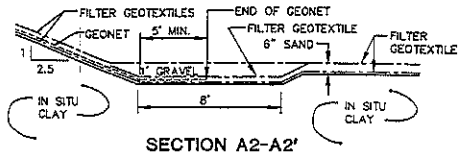
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7 EXCAVATION PLAN

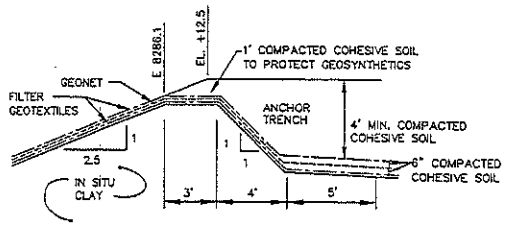
DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	720
REVIEWED		FILE NO.			

000605





SECTION A2-A2'



SECTION B2-B2'

SCALE IN FEET
0 4 8

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE . THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE PRESSURE RELIEF SYSTEM.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -37.25.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8886.006, E 7342.279).

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- R — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET
0 200 400

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23534
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
2-17-95

Golder Associates Houston, Texas

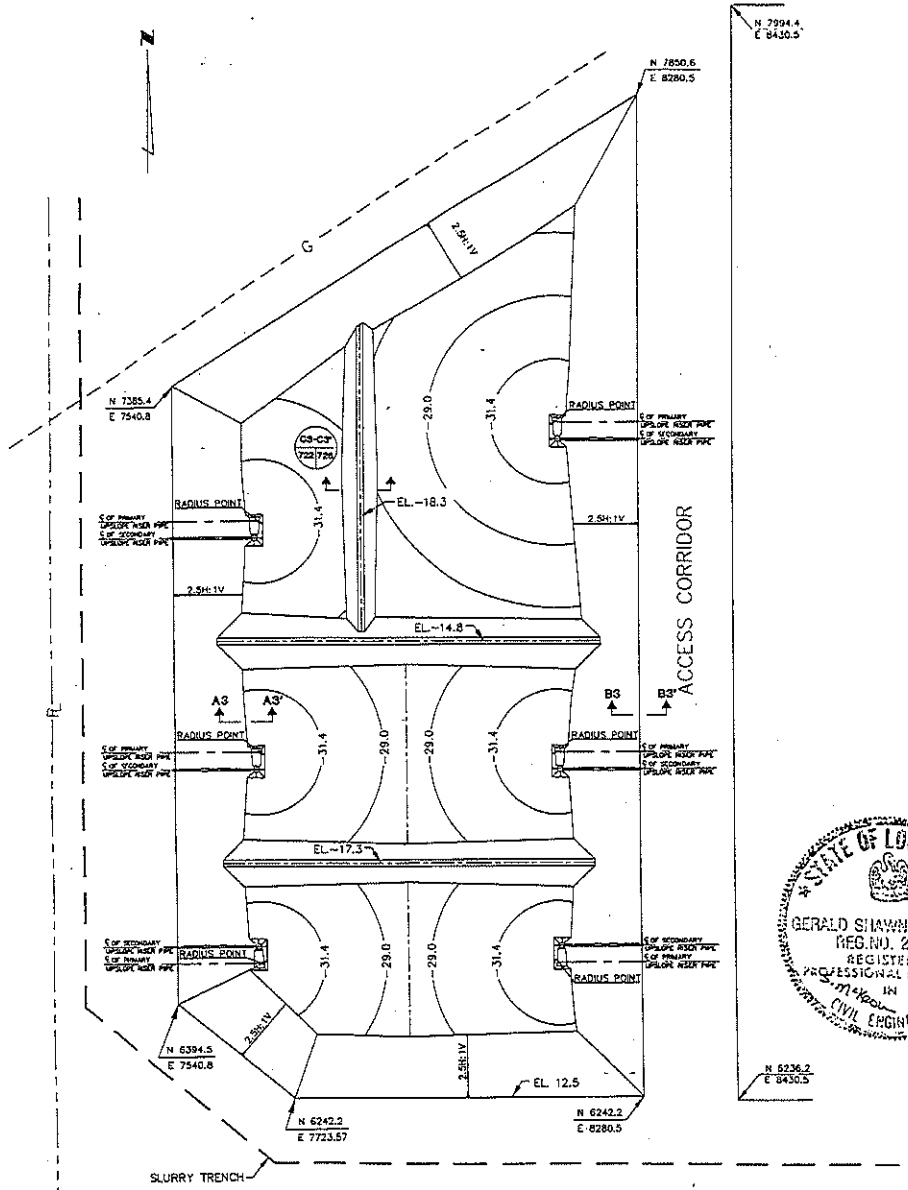
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

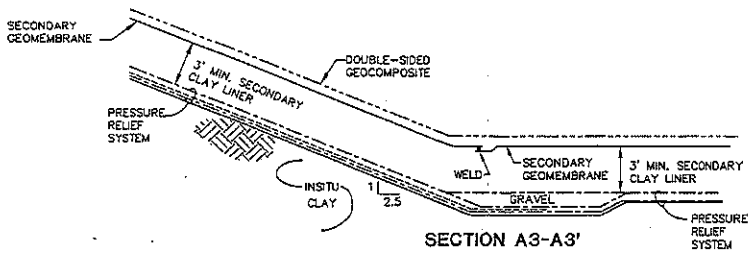
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
PRESSURE RELIEF SYSTEM

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	721
REVIEWED	Sky	FILE NO.	853-3197	FIGURE NO.	7

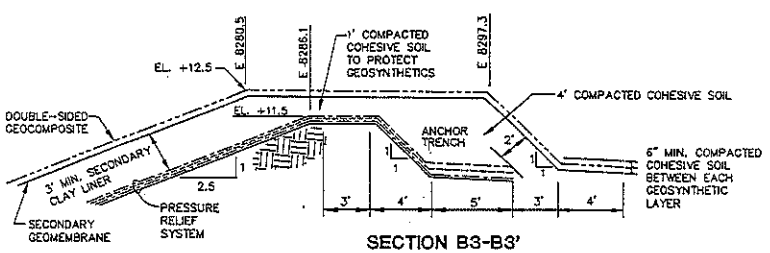
000606





SECTION A3-A3'

NOT TO SCALE



SECTION B3-B3'

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- R — PROPERTY LINE
- SLURRY TRENCH

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE . THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE SECONDARY CONTAINMENT AND COLLECTION SYSTEMS.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -33.95.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9540), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2-17-95

SCALE IN FEET

0 200 400

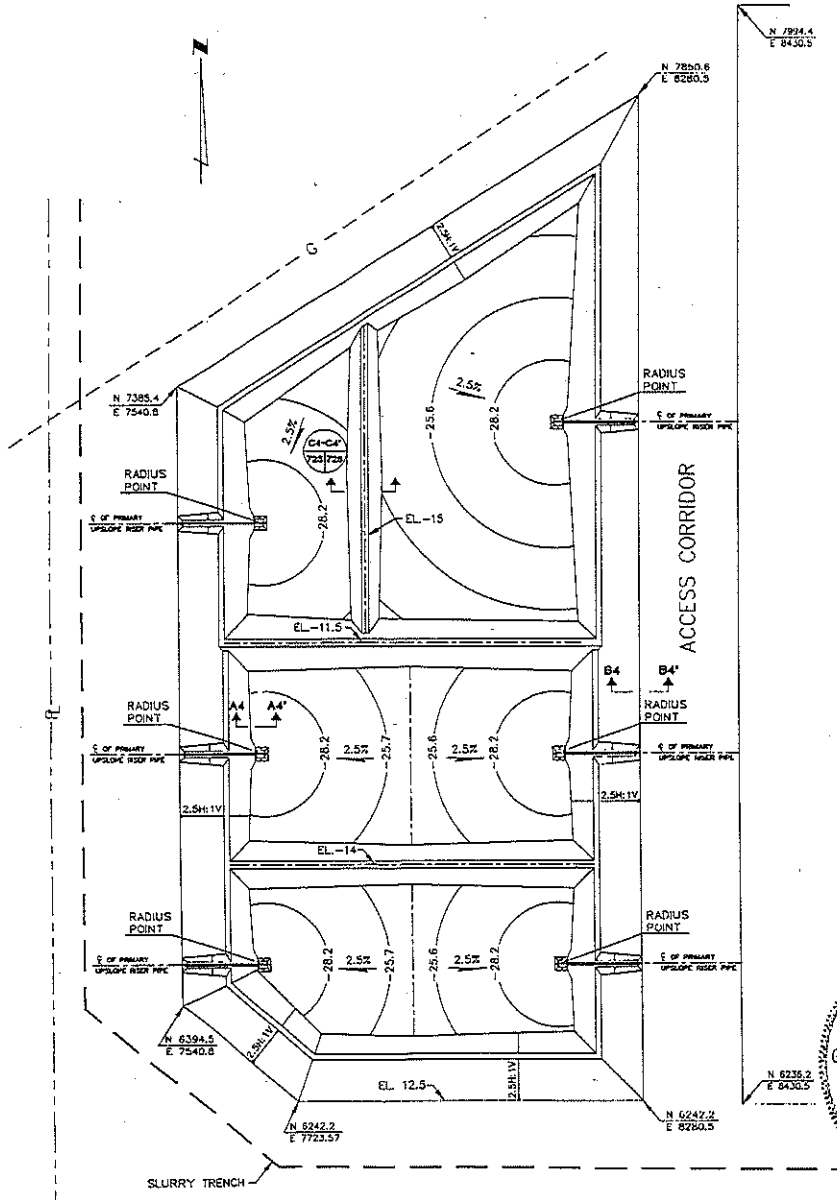
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

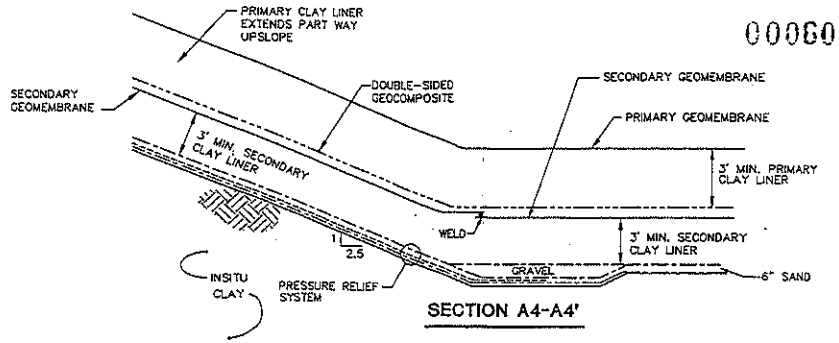
CELL 7
SECONDARY CONTAINMENT AND COLLECTION SYSTEMS

Golder Associates Houston, Texas

Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

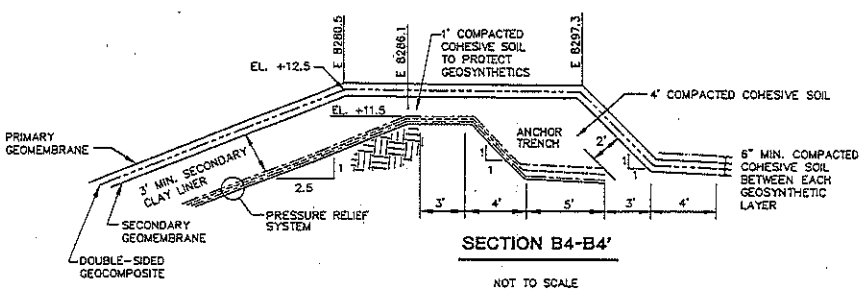
DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	722
REVIEWED	SMM	FILE NO.	853-3197	FIGURE NO.	8





SECTION A4-A4'

NOT TO SCALE



SECTION B4-B4'

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- ℄ — PROPERTY LINE
- SLURRY TRENCH

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE . THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE PRIMARY CONTAINMENT SYSTEM.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -30.65.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

SCALE IN FEET

200 400

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23934
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

Golder Associates Houston, Texas

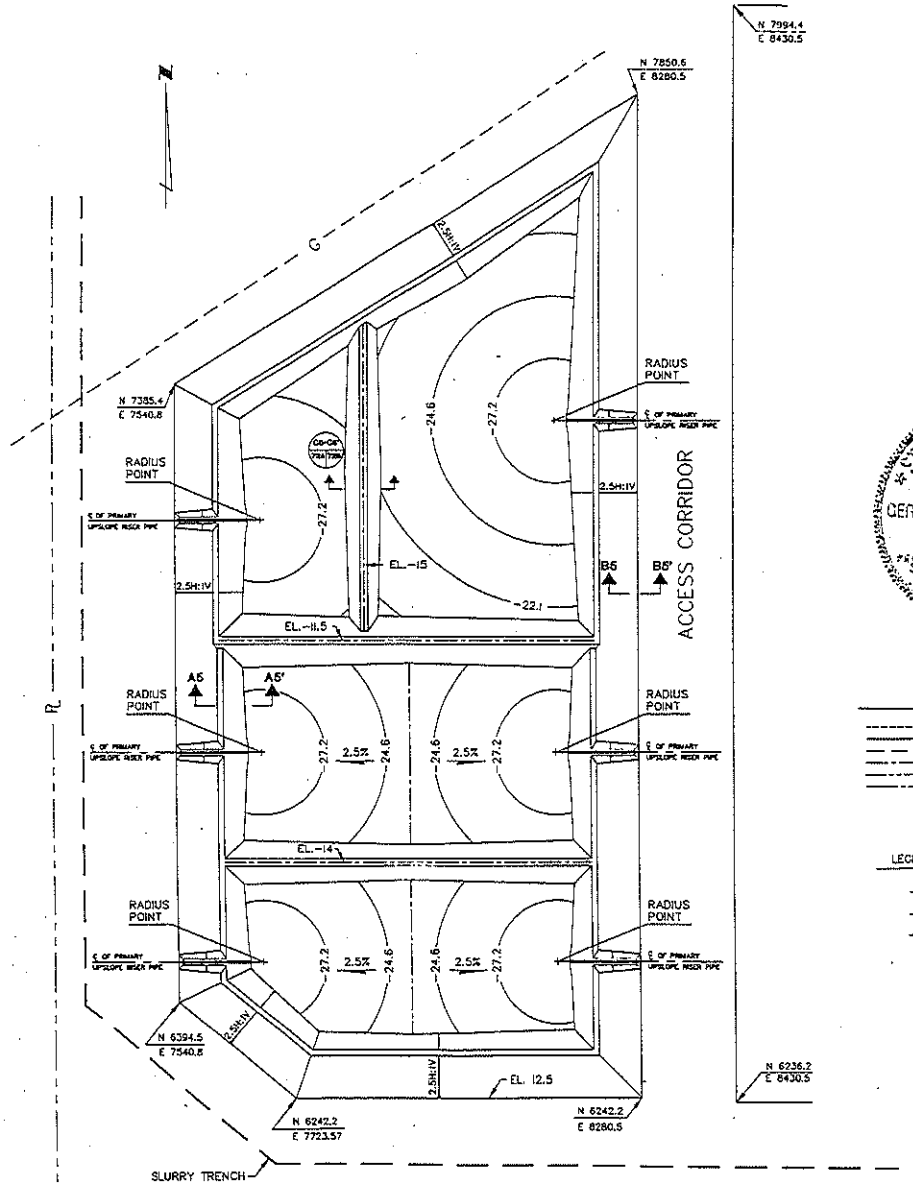
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

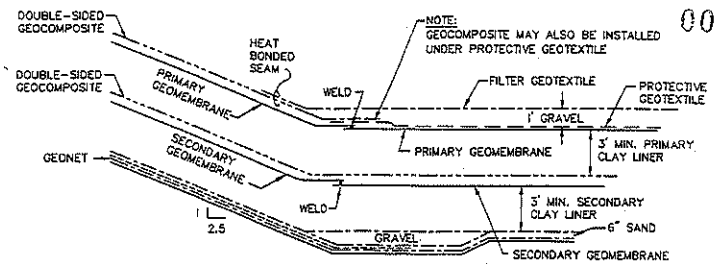
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
PRIMARY CONTAINMENT SYSTEM

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	723
REVIEWED	SMy	FILE NO.	853-3197	FIGURE NO.	9

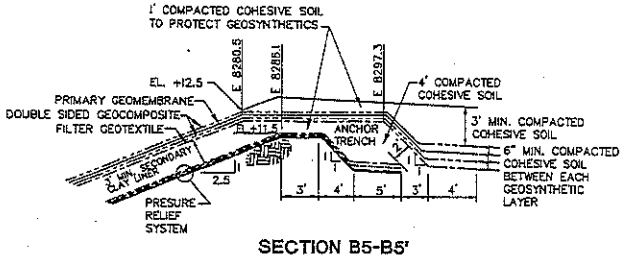
000603





SECTION A5-A5'

NOT TO SCALE



SECTION B5-B5'

NOT TO SCALE

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET

0 200 400

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE . THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE PRIMARY COLLECTION SYSTEM.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -29.85.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3536), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

Golder Associates Houston, Texas

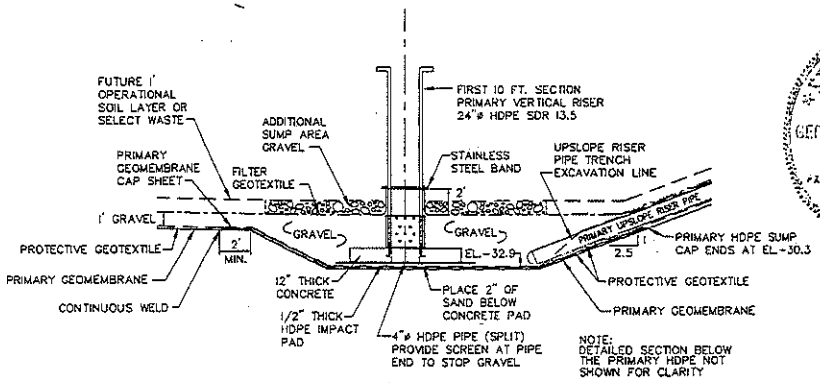
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
PRIMARY COLLECTION SYSTEM

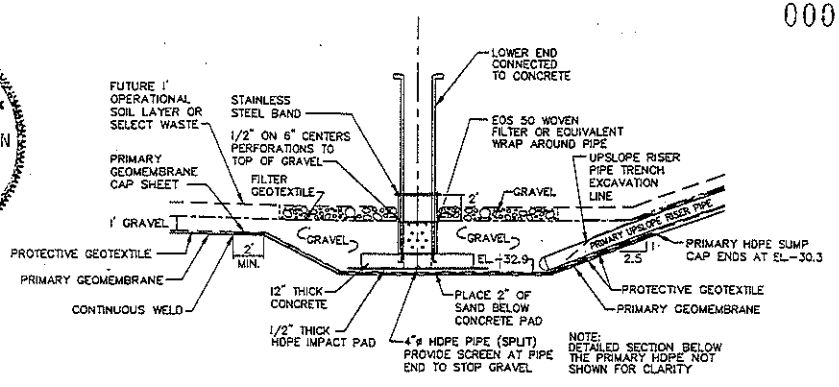
DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	724
REVIEWED	SM	FILE NO.	853-3197	FIGURE NO.	10

000609



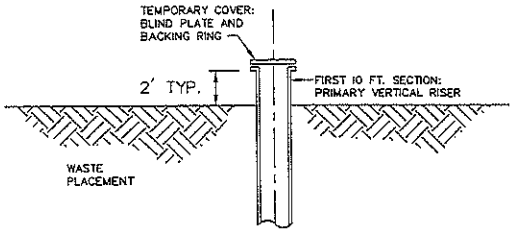
ADDITIONAL SUMP AREA GRAVEL

NOT TO SCALE



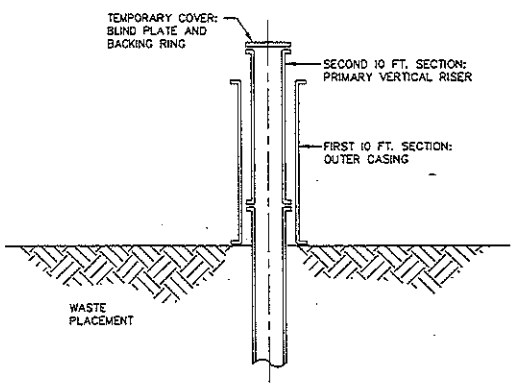
PRIMARY VERTICAL RISER, FIRST SECTION

NOT TO SCALE



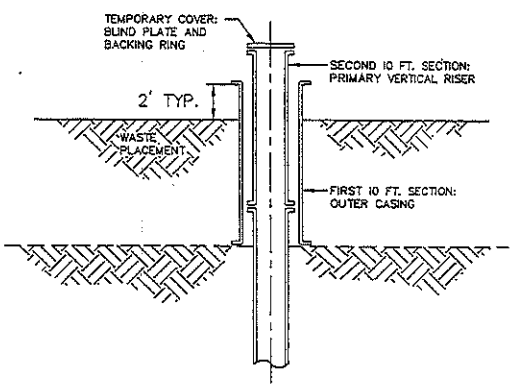
OUTER CASING INSTALLATION I

NOT TO SCALE



OUTER CASING INSTALLATION II

NOT TO SCALE



OUTER CASING INSTALLATION III

NOT TO SCALE

NOTES:

1. 10-FOOT SECTIONS WILL BE JOINED WITH FLANGE ADAPTORS AND STAINLESS STEEL BACKING RINGS.
2. INSTALLATION OF ADDITIONAL SECTIONS WILL BE SIMILAR TO DETAIL SHOWN IN OUTER CASING INSTALLATION III.

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

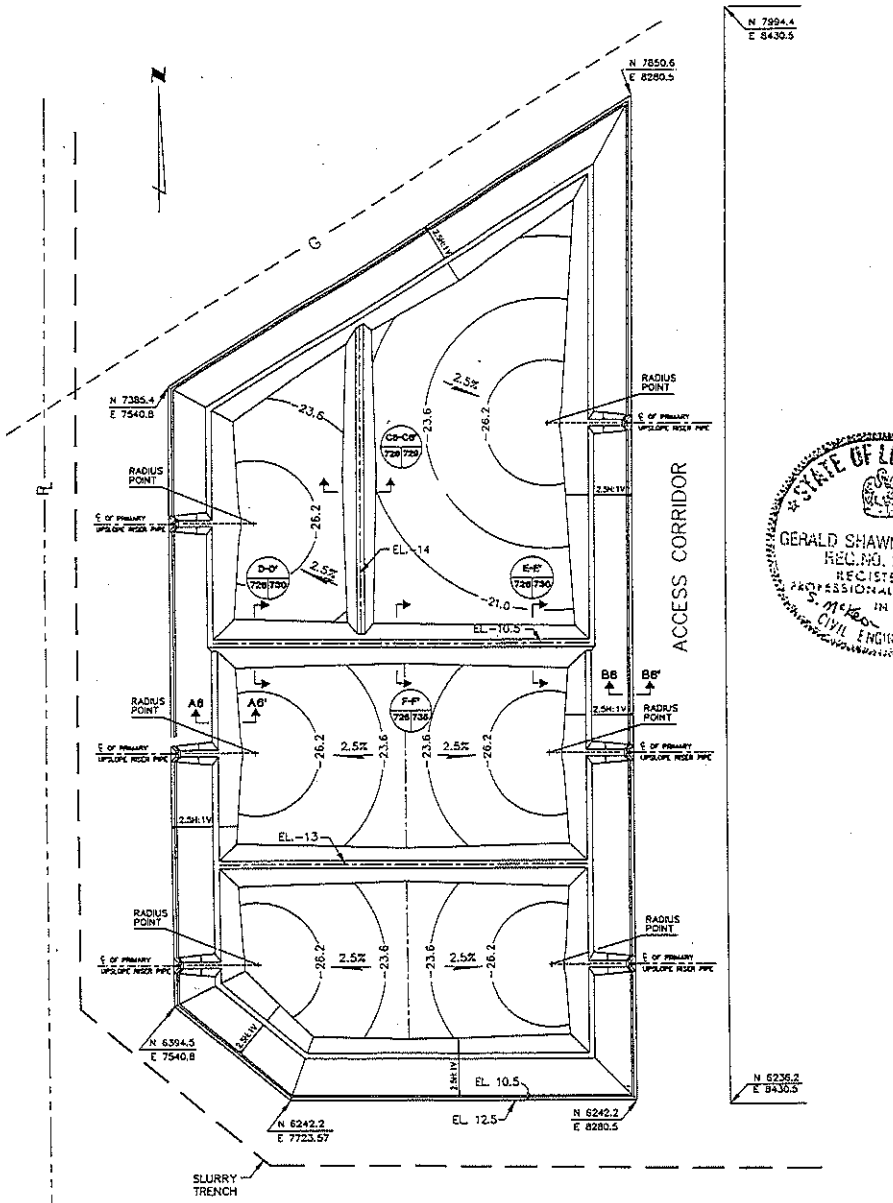
Golder Associates Houston, Texas

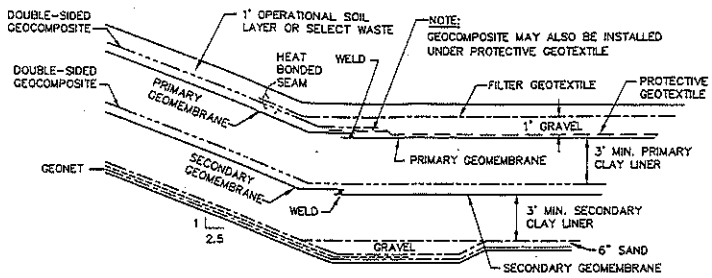
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7 - PRIMARY COLLECTION SYSTEM DETAILS

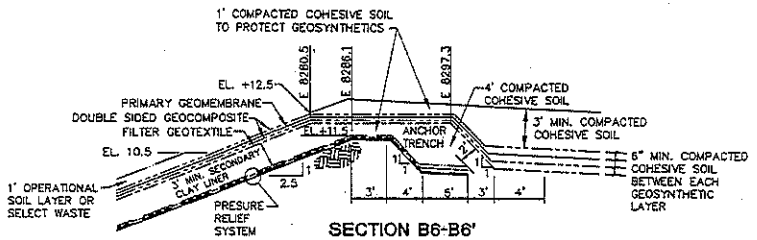
DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RLP	SCALE	AS SHOWN	DWG. NO.	725
REVIEWED	GSM	FILE NO.	853-3197	FIGURE NO.	11





SECTION A6-A6'

NOT TO SCALE



SECTION B6-B6'

NOT TO SCALE

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23554
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE OPERATIONAL SOIL LAYER OR SELECT WASTE.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -28.65.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.
7. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
8. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

SCALE IN FEET

0 200 400

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

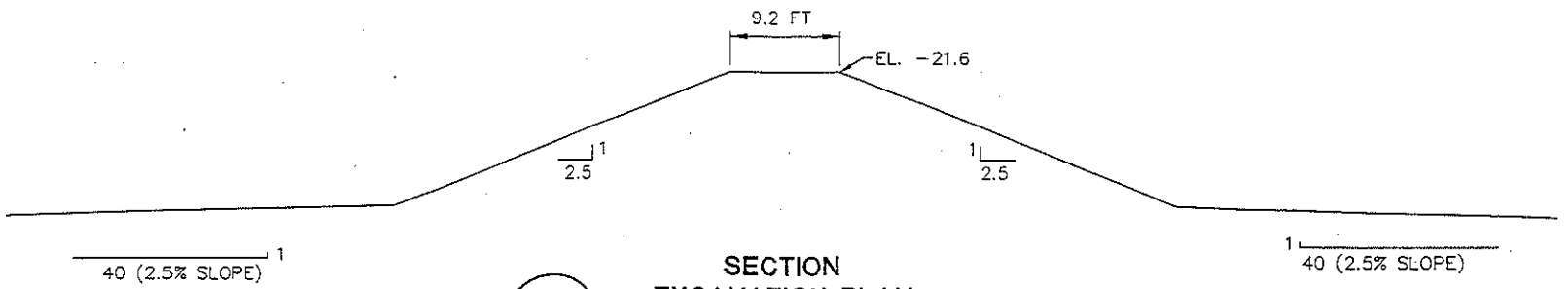
CELL 7
OPERATIONAL LAYER OF SOIL OR SELECT WASTE

Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

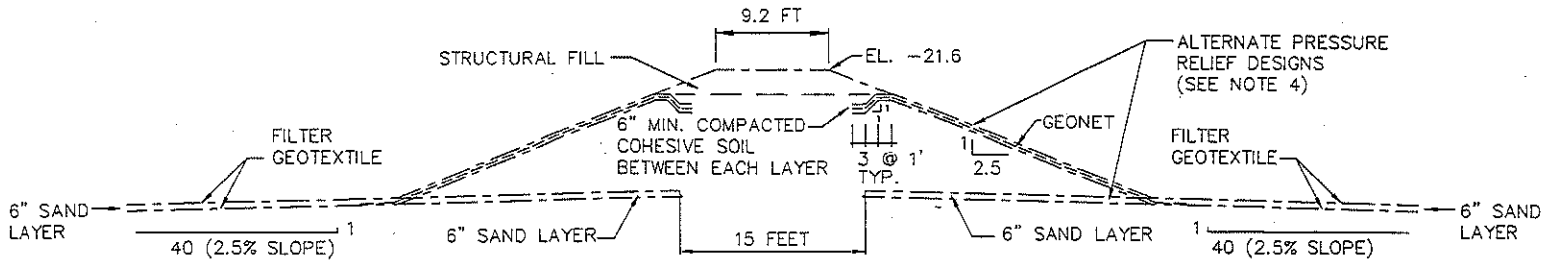
DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	PP	SCALE	AS SHOWN	DWG. NO.	726
REVIEWED	SKM	FILE NO.	853-3197	FIGURE NO.	12

000611
000612



C-C'
720 | 727

SECTION EXCAVATION PLAN



C2-C2'
721 | 727

SECTION PRESSURE RELIEF SYSTEM

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. THE PRESSURE RELIEF DESIGNS AT THE DIVIDER BERM WILL BE EITHER OVER THE BERM OR UNDER THE BERM AS SHOWN ABOVE.

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 25534
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
2-17-95

SCALE IN FEET
0 10 20

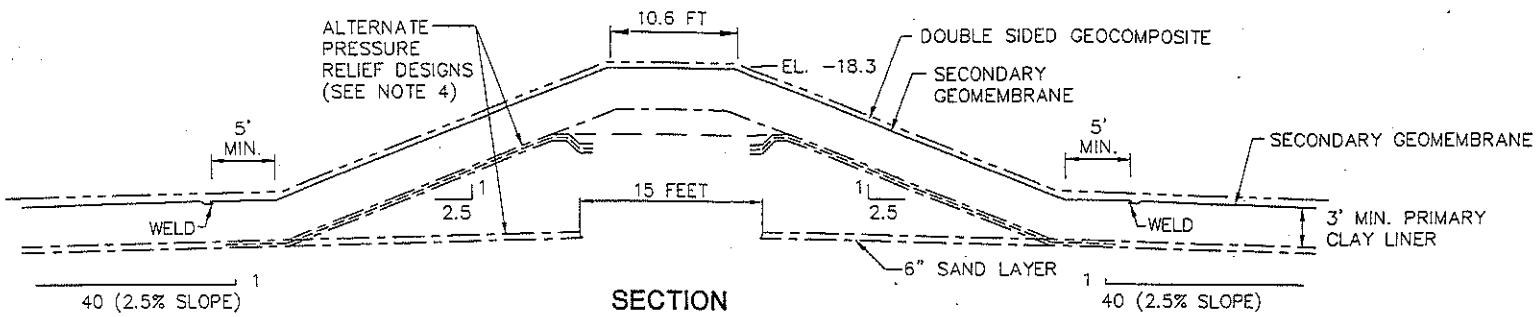
Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

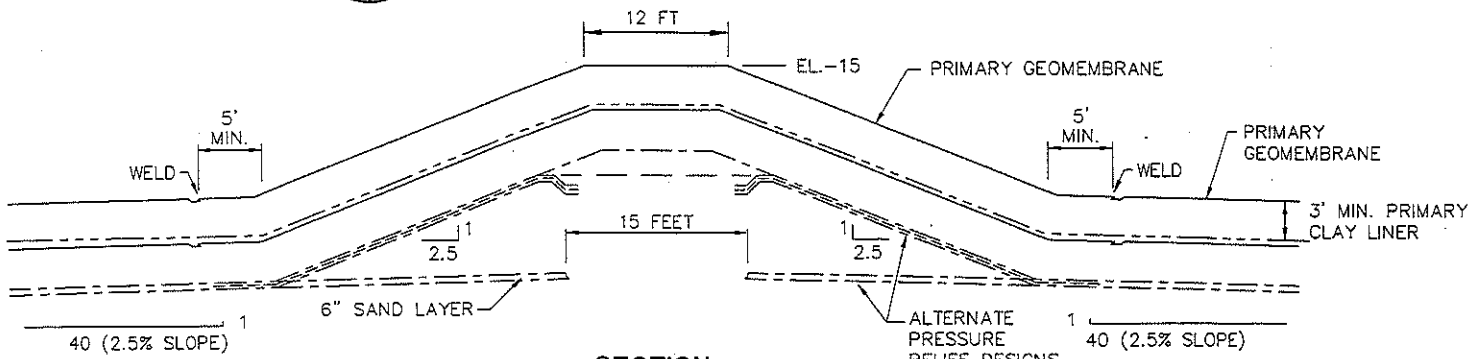
CELL 7
NORTH/SOUTH DIVIDER
BERM SECTIONS I

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	ZP	SCALE	AS SHOWN	DWG. NO.	727
REVIEWED	SMM	FILE NO.	853-3197	FIGURE NO.	13



SECTION SECONDARY CONTAINMENT AND COLLECTION SYSTEMS

C3-C3' | 722 | 728



SECTION PRIMARY CONTAINMENT SYSTEM

C4-C4' | 723 | 728

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. THE PRESSURE RELIEF DESIGNS AT THE DIVIDER BERM WILL BE EITHER OVER THE BERM OR UNDER THE BERM AS SHOWN ABOVE.

STATE OF LOUISIANA — GERALD SHAWN McKEOWN — NO. 23394 — REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING — 2-17-95

SCALE IN FEET

0 10 20

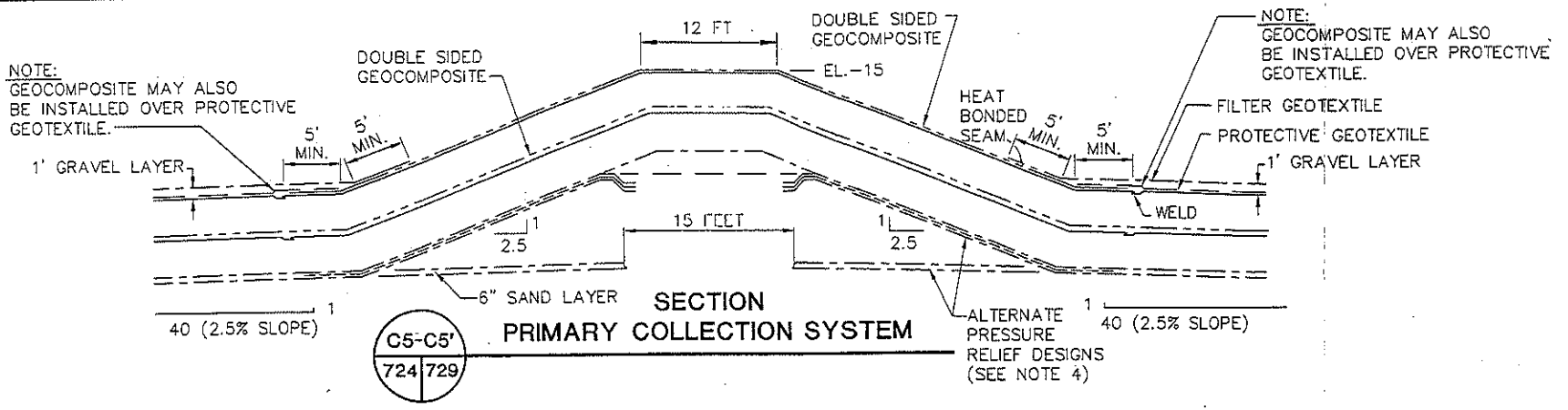
Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

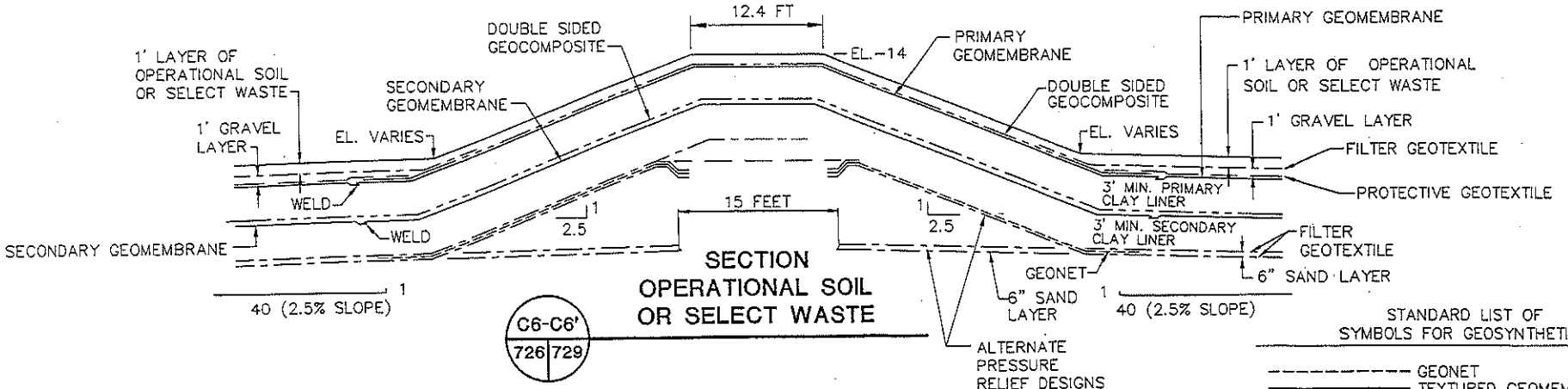
CELL 7
NORTH/SOUTH DIVIDER
BERM SECTIONS II

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RLP	SCALE	AS SHOWN	DWG. NO.	728
REVIEWED	SWJ	FILE NO.	853-3197	FIGURE NO.	14



SECTION
PRIMARY COLLECTION SYSTEM

C5-C5'
724 | 729



SECTION
OPERATIONAL SOIL OR SELECT WASTE

C6-C6'
726 | 729

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. THE PRESSURE RELIEF DESIGNS AT THE DIVIDER BERM WILL BE EITHER OVER THE BERM OR UNDER THE BERM AS SHOWN ABOVE.

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23934
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING
2-17-95

SCALE IN FEET
0 10 20

Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

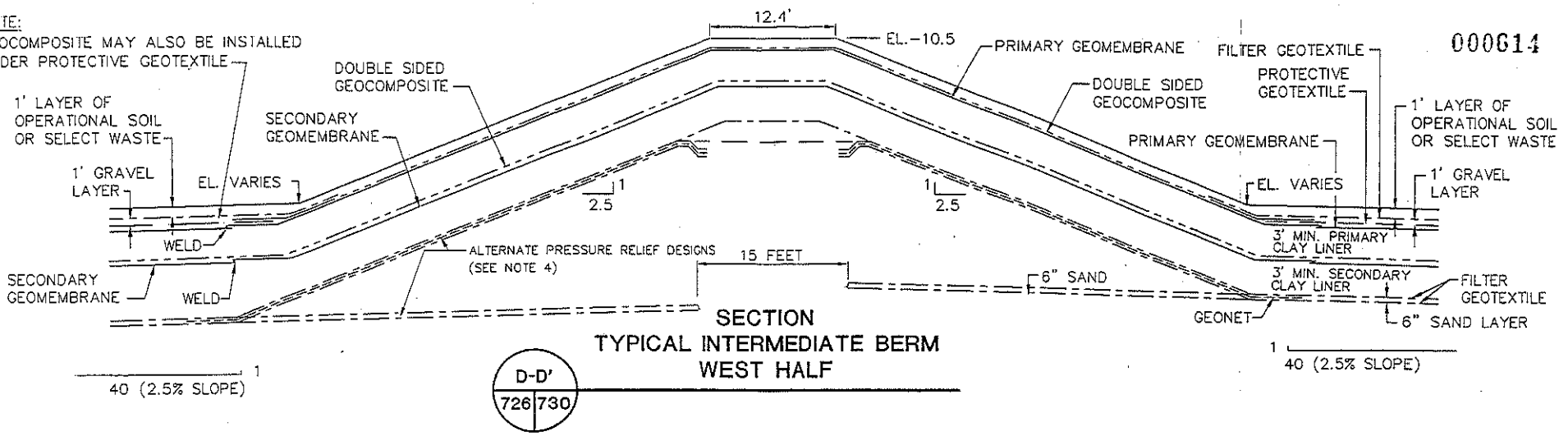
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
NORTH/SOUTH DIVIDER
BERM SECTIONS III

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	[illegible]	SCALE	AS SHOWN	DWG. NO.	729
REVIEWED	[illegible]	FILE NO.	853-3197	FIGURE NO.	15

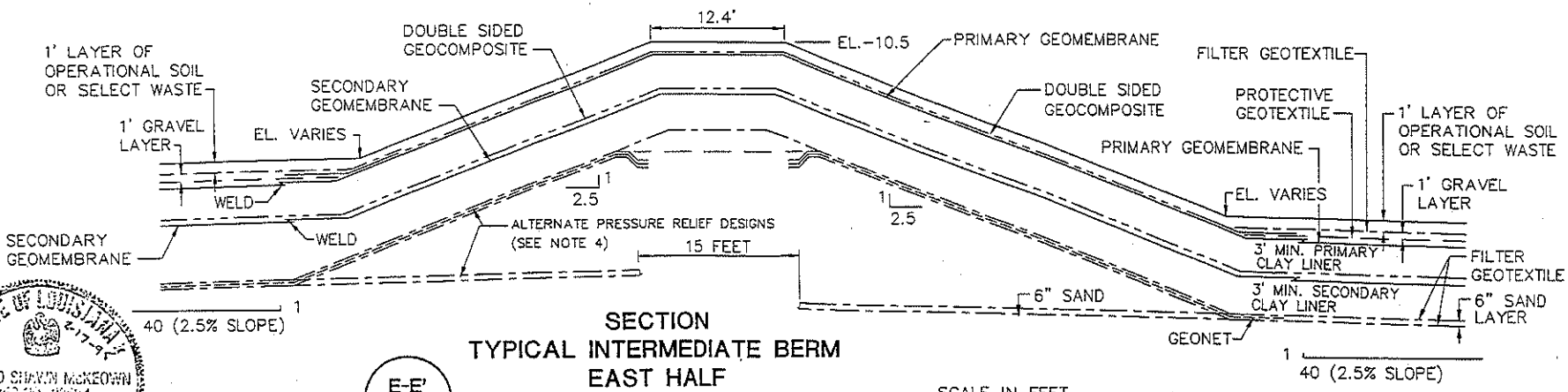
NOTE:
GEOCOMPOSITE MAY ALSO BE INSTALLED UNDER PROTECTIVE GEOTEXTILE

000614



SECTION
TYPICAL INTERMEDIATE BERM
WEST HALF

D-D'
726|730



SECTION
TYPICAL INTERMEDIATE BERM
EAST HALF

E-E'
726|730

SCALE IN FEET
0 10 20

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 25504
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2-17-95

NOTES:
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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. THE PRESSURE RELIEF DESIGNS AT THE DIVIDER BERM WILL BE EITHER OVER OR UNDER THE BERM AS SHOWN ABOVE.

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS
- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

Golder Associates Houston, Texas

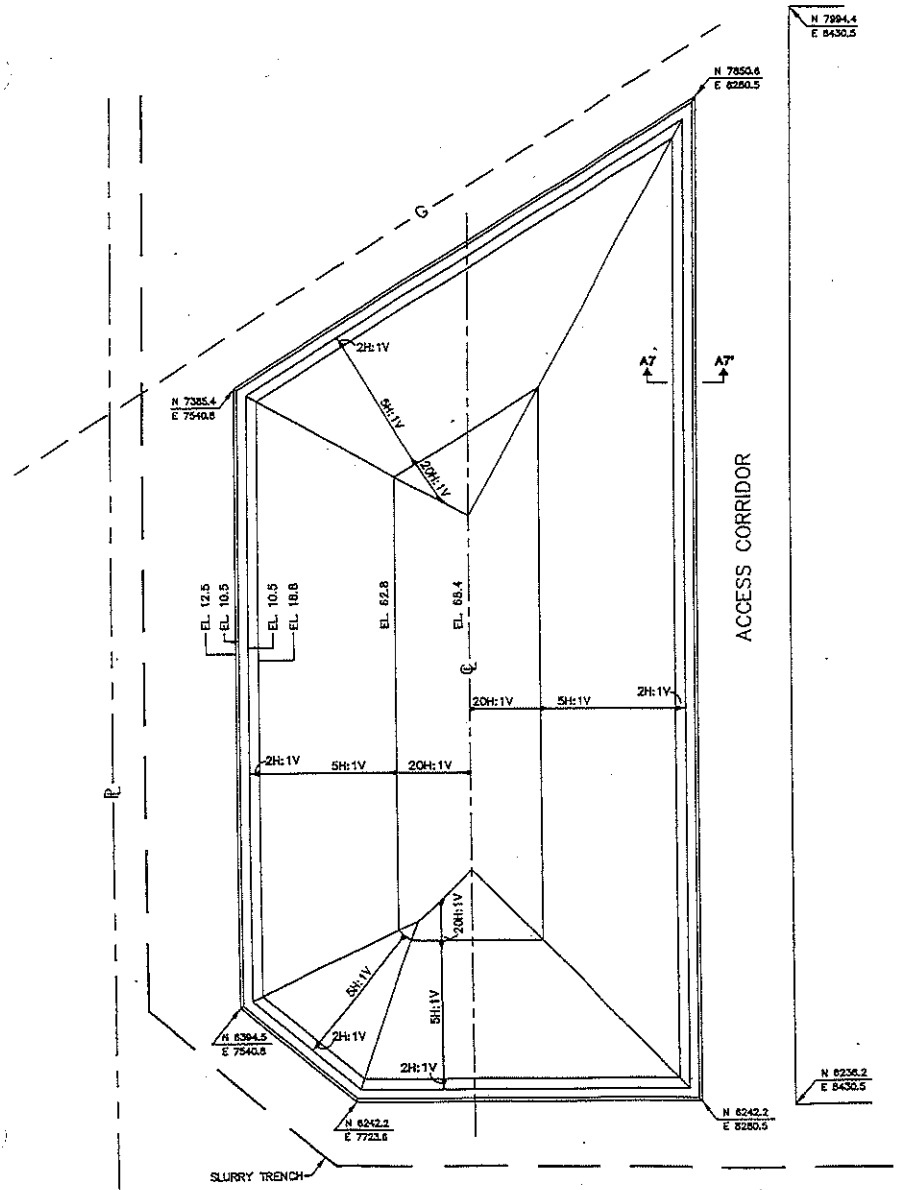
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

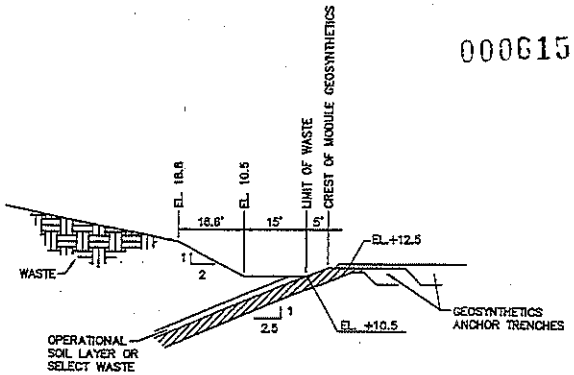
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
INTERMEDIATE BERM SECTIONS

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	730
REVIEWED	SNY	FILE NO.	853-3197	FIGURE NO.	16

000615





SECTION A7-A7'
PERIMETER RUNOFF CONTROL DITCH

SCALE IN FEET
0 20 40

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- P — PROPERTY LINE
- SLURRY TRENCH

STATE OF LOUISIANA
2-17-95
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING

SCALE IN FEET
0 200 400

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE SURFACE OF WASTE.
5. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 8125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).
6. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 8043.488, E 7338.244), AND (N 9686.006, E 7342.279).

Golder Associates Houston, Texas

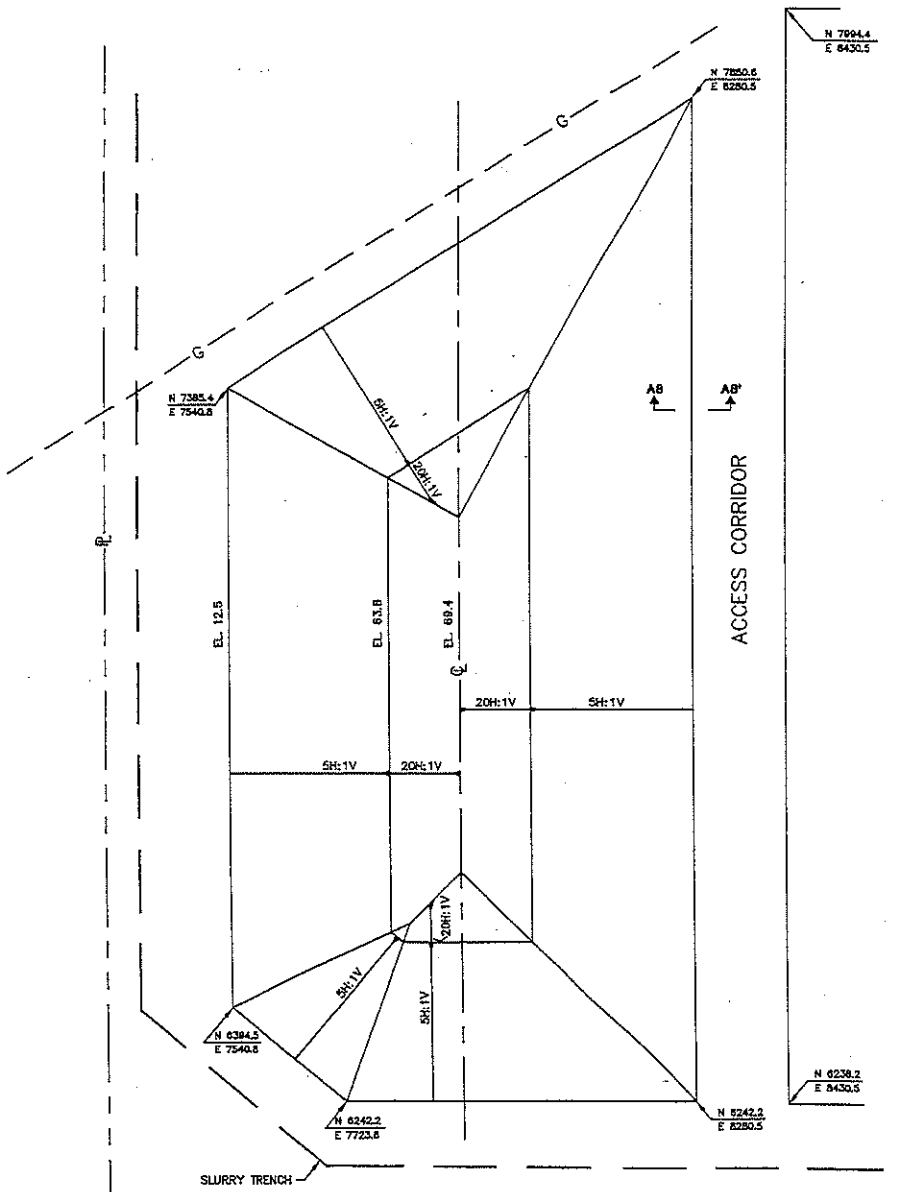
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

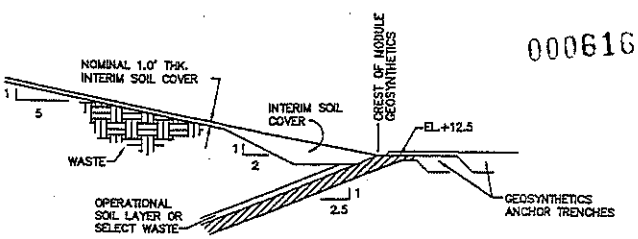
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
SURFACE OF WASTE

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	731
REVIEWED	SMY	FILE NO.	853-3197	FIGURE NO.	17

000616





SECTION A8-A8'
VICINITY OF PERIMETER RUNOFF CONTROL DITCH

SCALE IN FEET
0 20 40

TYPICAL SECTION

NOT TO SCALE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET
0 200 400

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE INTERIM SOIL COVER.
5. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 8140, E 7590), AND (N 8631, E 7392).
6. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 8025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

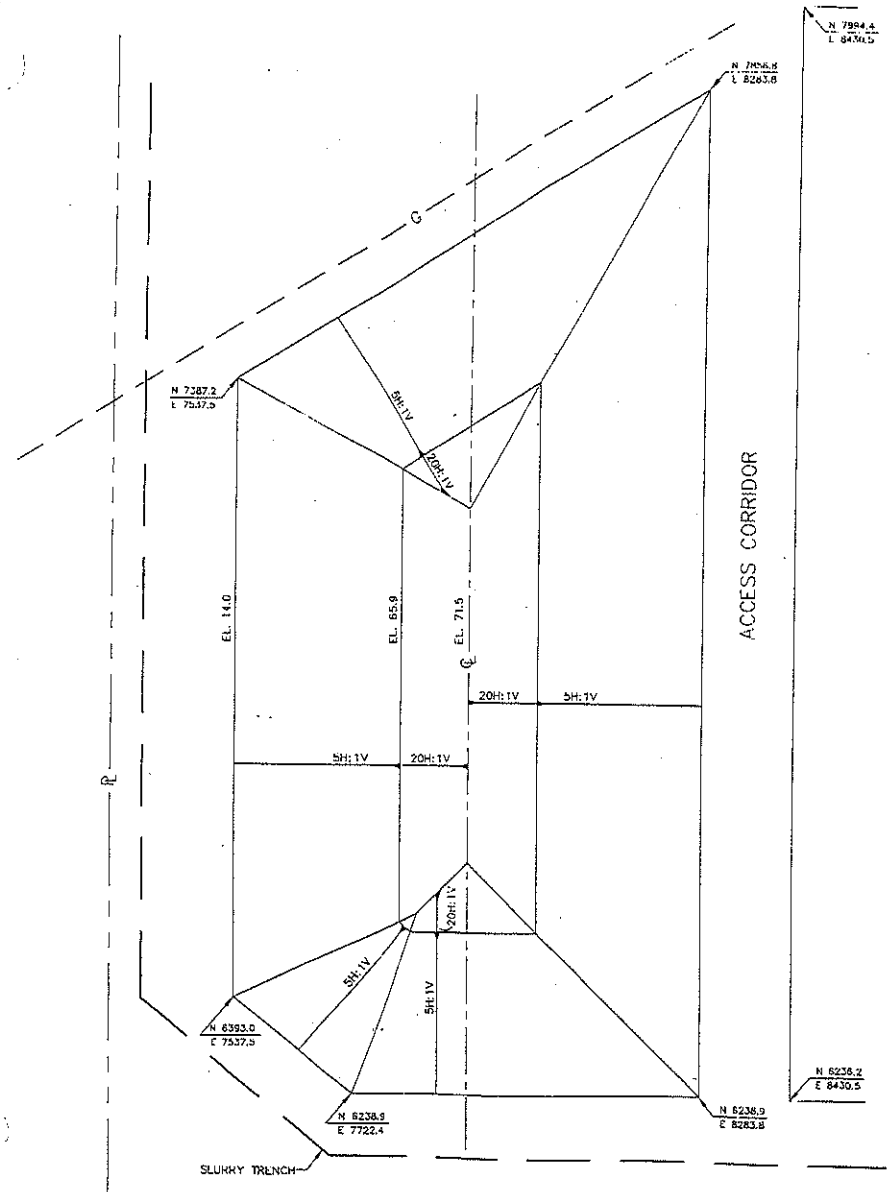
Golder Associates Houston, Texas

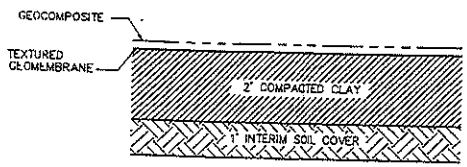
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
INTERIM SOIL COVER

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	DP	SCALE	AS SHOWN	DWG. NO.	732
REVIEWED	SM	FILE NO.	853-3197	FIGURE NO.	18





TYPICAL SECTION

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET

0 200 400

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG.NO. 25534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2-17-95

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE COMPOSITE COVER SYSTEM.
5. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 8125, E 9640), (N 8140, E 7690), AND (N 8631, E 7392).
6. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.468, E 7338.244), AND (N 8686.006, E 7342.279).

Golder Associates Houston, Texas

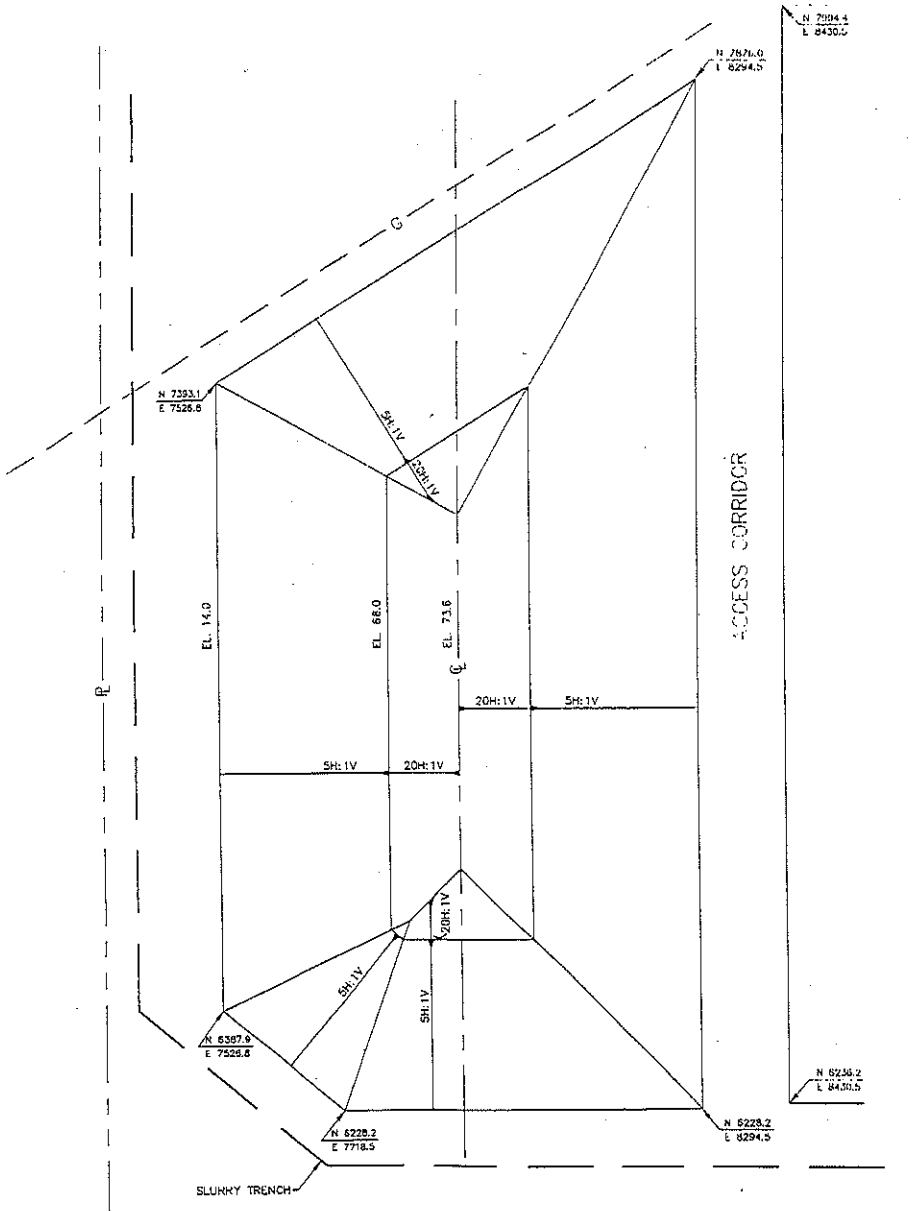
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

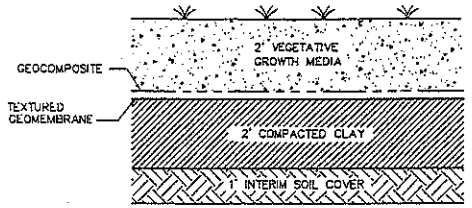
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
COMPOSITE COVER SYSTEM AND SYNTHETIC DRAINAGE LAYER

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	733
REVIEWED	SAM	FILE NO.	863-7107	FIGURE NO.	

000618





TYPICAL SECTION

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET

0 200 400

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

NOTES:

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2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE VEGETATIVE GROWTH MEDIA LAYER.
5. THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 8125, E 9640), (N 8140, E 7690), AND (N 8631, E 7392).
6. THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 8025.7527, E 10009.3538), (N 8043.458, E 7338.244), AND (N 8586.006, E 7342.279).

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

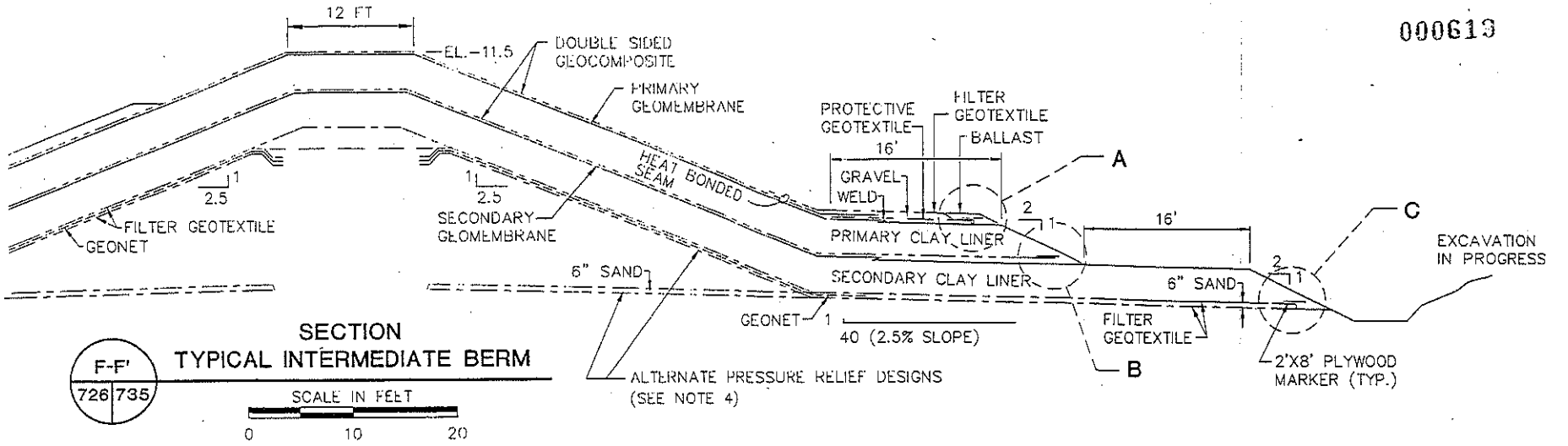
CELL 7
VEGETATIVE GROWTH MEDIA LAYER

Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	734
REVIEWED	SM	FILE NO.	853-3197	FIGURE NO.	20

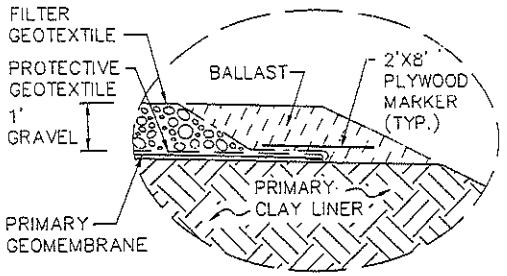
000613



F-F'
726 735

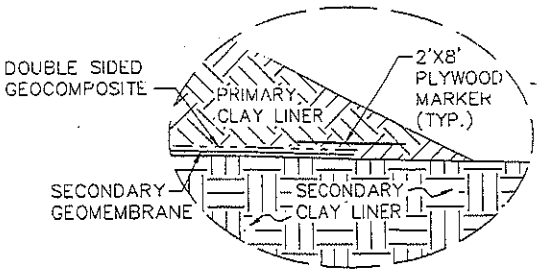
SECTION
TYPICAL INTERMEDIATE BERM

SCALE IN FEET
0 10 20



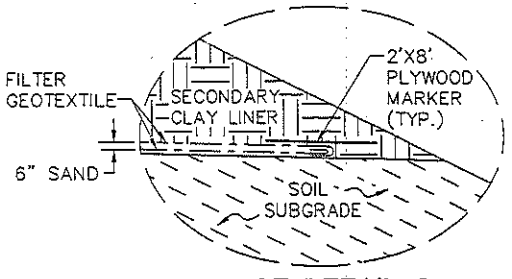
SPOT DETAIL A

NOT TO SCALE



SPOT DETAIL B

NOT TO SCALE



SPOT DETAIL C

NOT TO SCALE

STANDARD LIST OF SYMBOLS FOR GEOSYNTHETICS

- GEONET
- TEXTURED GEOMEMBRANE
- PROTECTIVE GEOTEXTILE
- FILTER GEOTEXTILE
- SACRIFICIAL GEOTEXTILE
- DOUBLE SIDED GEOCOMPOSITE

NOTES:

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STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2-17-95

Golder Associates Houston, Texas

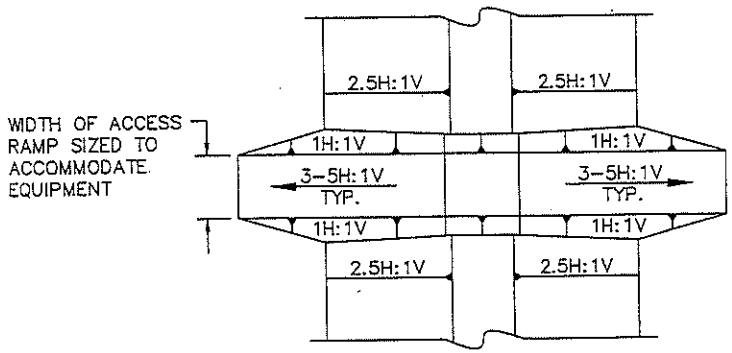
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

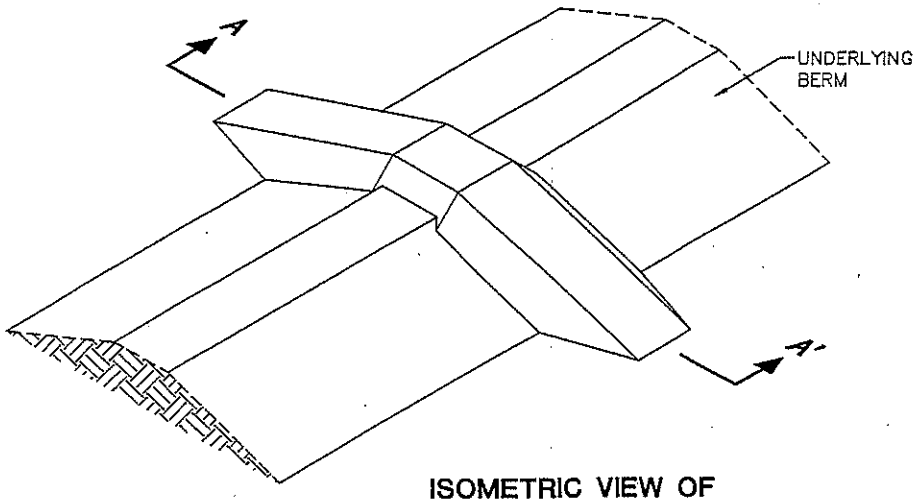
INTERMEDIATE BERM PROVISION FOR FUTURE TIE-IN

DRAWN	dhg	DATE	FEBRUARY 1995	JOB NO.	933-4177
CHECKED	DP	SCALE	AS SHOWN	DWG. NO.	735
REVIEWED	SM	FILE NO.	853-3197	FIGURE NO.	21

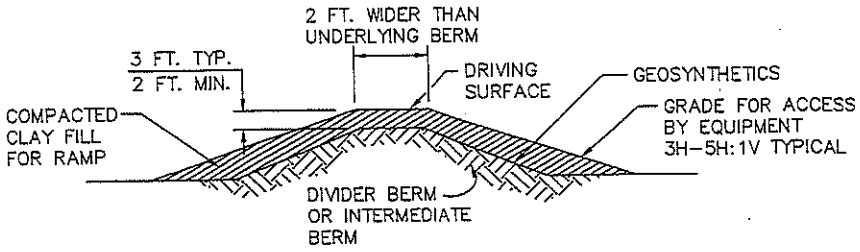
000620



PLAN VIEW



ISOMETRIC VIEW OF CONSTRUCTION ACCESS RAMP



SECTION A-A'

SCALE IN FEET

0 20 40

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
2-17-95

Golder Associates Houston, Texas

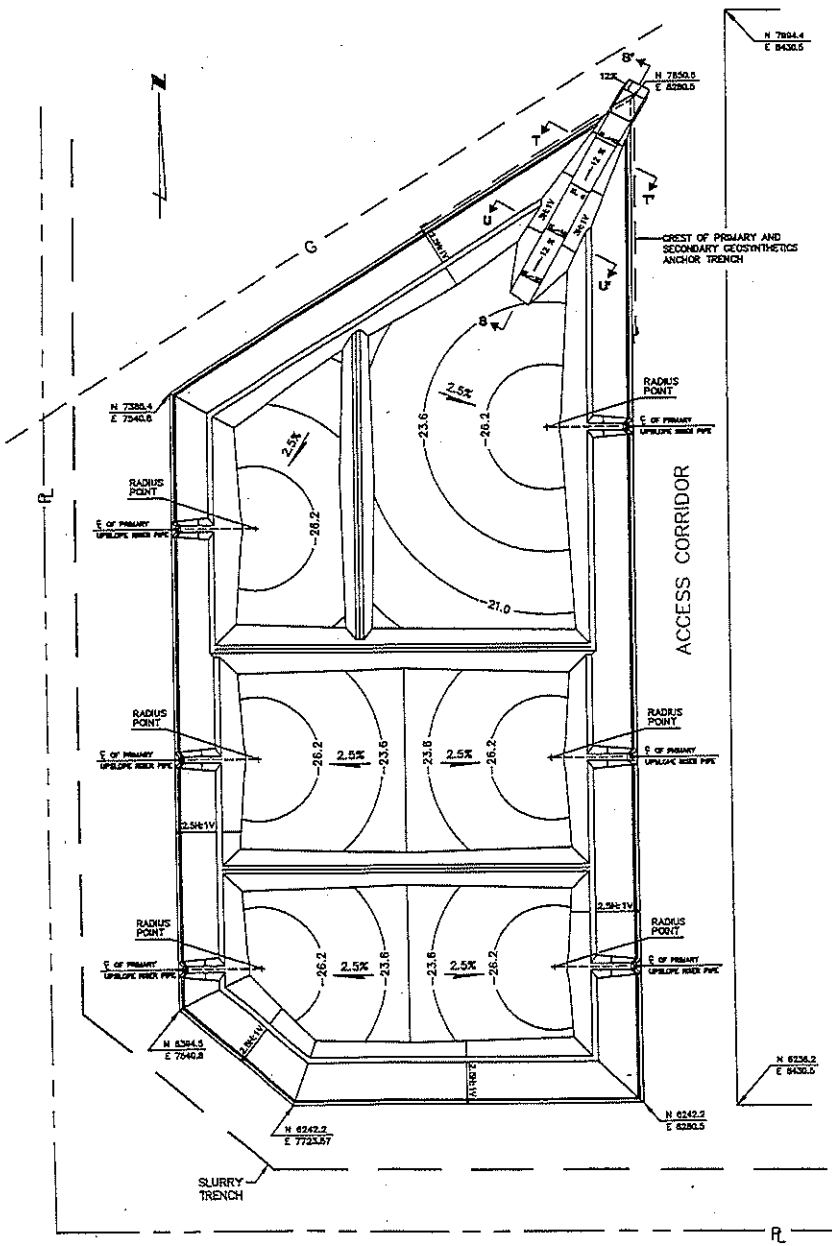
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

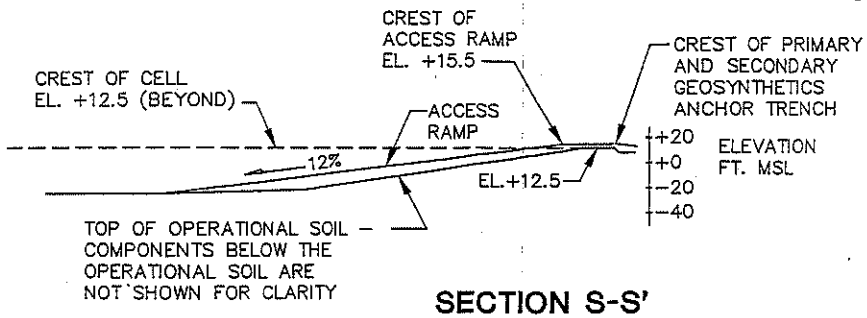
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

TITLE: TYPICAL CONSTRUCTION ACCESS RAMP

DRAWN MPC	DATE JANUARY 1995	JOB NO. 933–4177
CHECKED LP	SCALE AS SHOWN	DWG. NO. 736
REVIEWED SMK	FILE NO. 853–3197	FIGURE NO. 22

000621

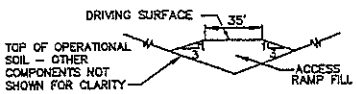




SECTION S-S'

SCALE IN FEET

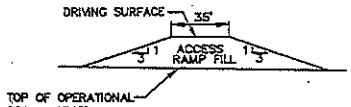
0 100 200



SECTION T-T'

SCALE IN FEET

0 50 100



SECTION U-U'

SCALE IN FEET

0 50 100

LEGEND:

- G — HIGH PRESSURE GAS PIPE LINE
- PL — PROPERTY LINE
- SLURRY TRENCH

SCALE IN FEET

0 200 400

NOTES:

1. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
2. COORDINATES TAKE PRECEDENCE OVER DRAWING SCALE.
3. ALL ELEVATIONS ARE IN FEET RELATIVE TO MEAN SEA LEVEL.
4. LINES AND ELEVATIONS SHOWN ON THIS SHEET ARE TAKEN AT THE TOP OF THE OPERATIONAL SOIL LAYER OR SELECT WASTE.
5. RADIUS CONTROL POINTS ON THIS SHEET ARE AT EL. -28.55.
6. ELEVATIONS AND CONTOURS SHOWN ON FLOOR ARE APPROXIMATE.

THE SLURRY TRENCH IS CONSTRUCTED FROM COORDINATES (N 6125, E 9640), (N 6140, E 7690), AND (N 8631, E 7392).

THE PROPERTY LINE IS CONSTRUCTED FROM COORDINATES (N 6025.7527, E 10009.3538), (N 6043.488, E 7338.244), AND (N 8686.006, E 7342.279).

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23534
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
2-17-95

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

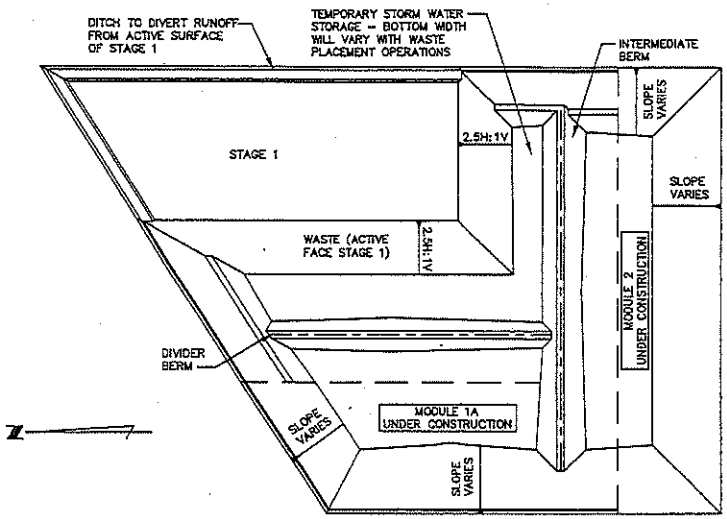
CELL 7
WASTE TRANSPORTER ACCESS RAMP

Golder Associates Houston, Texas

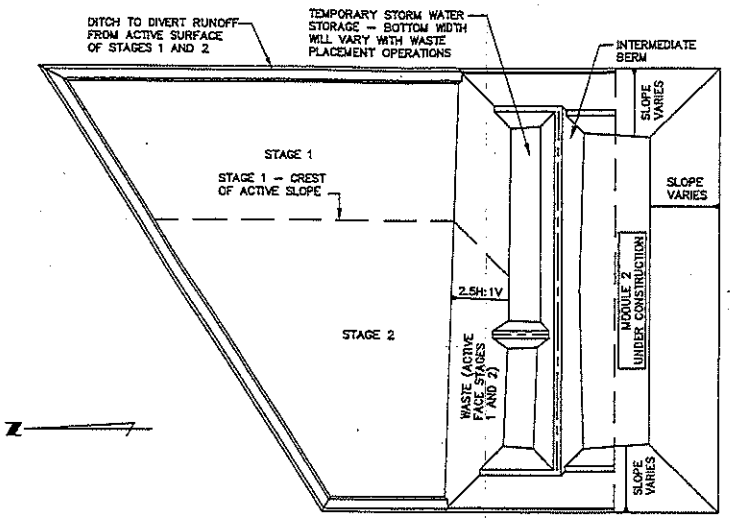
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED		SCALE	AS SHOWN	DWG. NO.	737
REVIEWED		FILE NO.	853-3197	FIGURE NO.	23

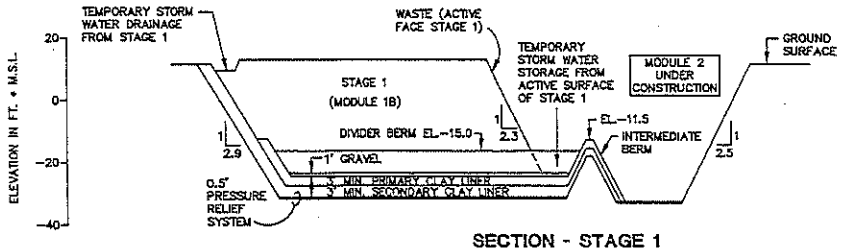
000622



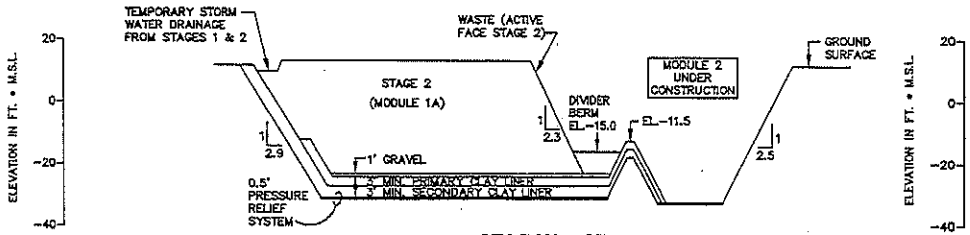
PLAN - STAGE 1



PLAN - STAGE 2



SECTION - STAGE 1



SECTION - STAGE 2

HORIZONTAL SCALE IN FEET
0 200 400
VERTICAL SCALE EXAGGERATED 5X

NOTES:

1. OPERATIONAL SEQUENCES SHOWN ARE CONCEPTUAL IN NATURE.
2. THE LOCATIONS OF THE RUN OFF DIVERSION BERMS AND DITCHES MAY VARY FROM THOSE SHOWN DEPENDING ON THE ACTUAL SEQUENCE OF WASTE PLACEMENT OPERATIONS.
3. HAUL ROADS FOR WASTE PLACEMENT ACCESS ARE NOT SHOWN FOR CLARITY. THE LOCATIONS, LINES AND GRADES WILL VARY WITH EACH OPERATIONAL STAGE.

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 29304
REGISTERED PROFESSIONAL ENGINEER
2-17-95

Golder Associates Houston, Texas

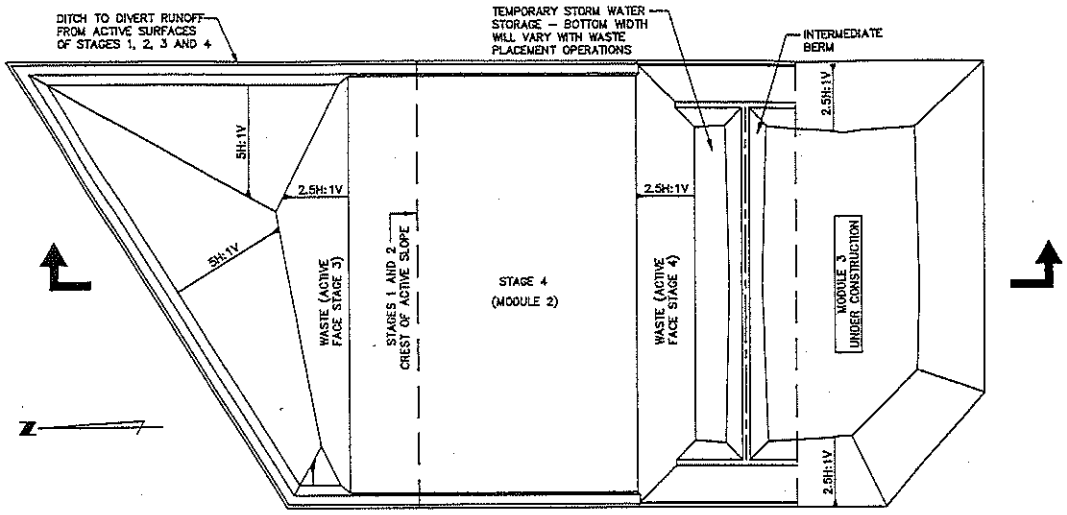
FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7 TYPICAL OPERATIONAL SEQUENCES 1 AND 2

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	RP	SCALE	AS SHOWN	DWG. NO.	738
REVIEWED	Saw	FILE NO.	853-3197	FIGURE NO.	24

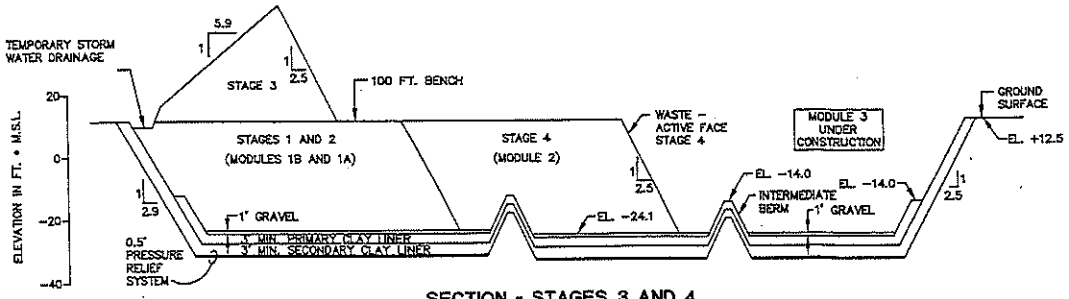
000623



PLAN - STAGES 3 AND 4

NOTES:

1. OPERATIONAL SEQUENCES SHOWN ARE CONCEPTUAL IN NATURE.
2. THE LOCATIONS OF THE RUN OFF DIVERSION BERMS AND DITCHES MAY VARY FROM THOSE SHOWN DEPENDING ON THE ACTUAL SEQUENCE OF WASTE PLACEMENT OPERATIONS.
3. HAUL ROADS FOR WASTE PLACEMENT ACCESS ARE NOT SHOWN FOR CLARITY. THE LOCATIONS, LINES AND GRADES WILL VARY WITH EACH OPERATIONAL STAGE.



SECTION - STAGES 3 AND 4

HORIZONTAL SCALE IN FEET

0 200 400

VERTICAL SCALE EXAGGERATED 5X

STATE OF LOUISIANA
2-17-95
GERALD SHAWN McKEOWN
REG.NO. 23534
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

Golder Associates Houston, Texas

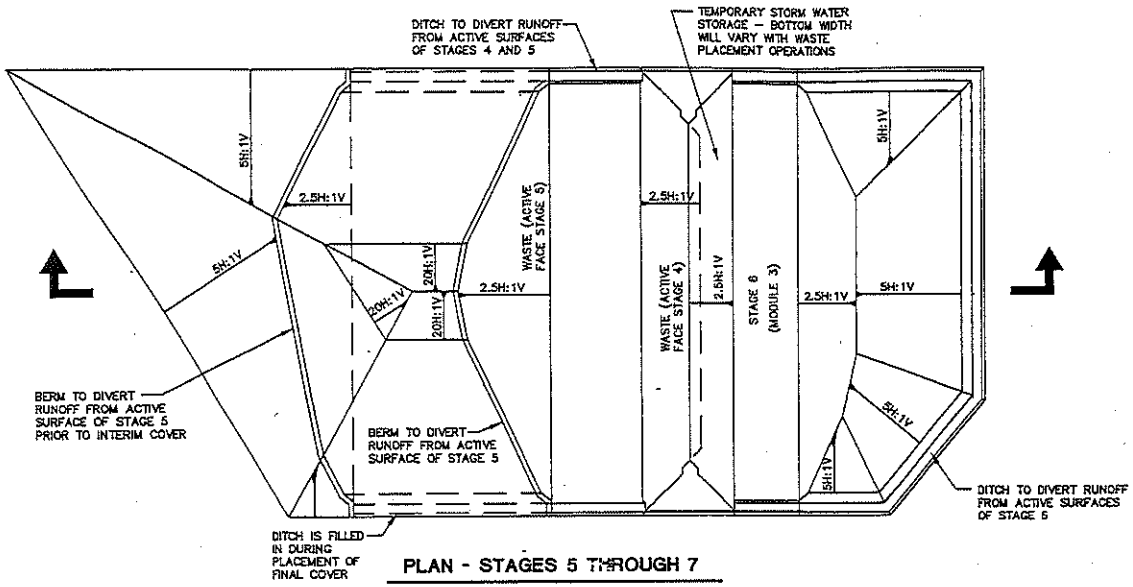
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

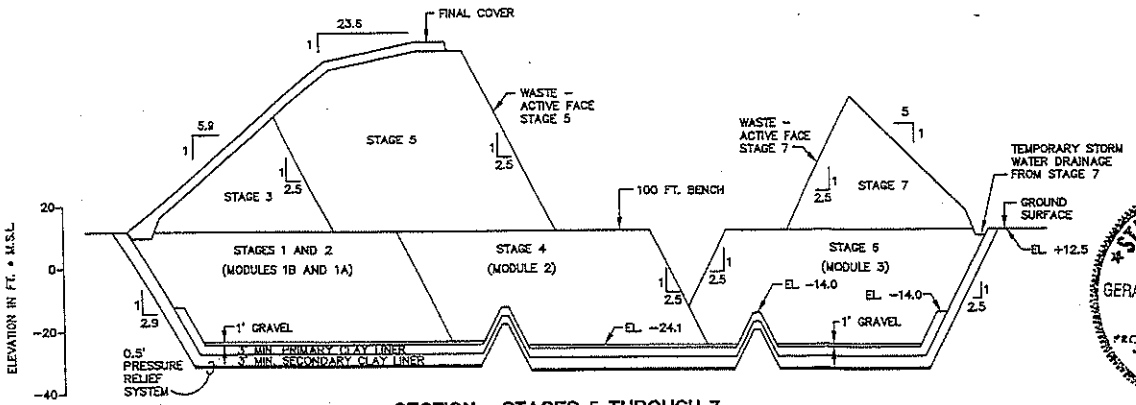
CELL 7
TYPICAL OPERATIONAL SEQUENCES 3 AND 4

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	[illegible]	SCALE	AS SHOWN	DWG. NO.	739
REVIEWED	SNM	FILE NO.	853-3197	FIGURE NO.	25

000624



PLAN - STAGES 5 THROUGH 7



SECTION - STAGES 5 THROUGH 7

HORIZONTAL SCALE IN FEET
0 200 400
VERTICAL SCALE EXAGGERATED 5X

NOTES:

1. OPERATIONAL SEQUENCES SHOWN ARE CONCEPTUAL IN NATURE.
2. THE LOCATIONS OF THE RUN OFF DIVERSION BERMS AND DITCHES MAY VARY FROM THOSE SHOWN DEPENDING ON THE ACTUAL SEQUENCE OF WASTE PLACEMENT OPERATIONS.
3. HAUL ROADS FOR WASTE PLACEMENT ACCESS ARE NOT SHOWN FOR CLARITY. THE LOCATIONS, LINES AND GRADES WILL VARY WITH EACH OPERATIONAL STAGE.

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 25924
REGISTERED PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING

Golder Associates Houston, Texas

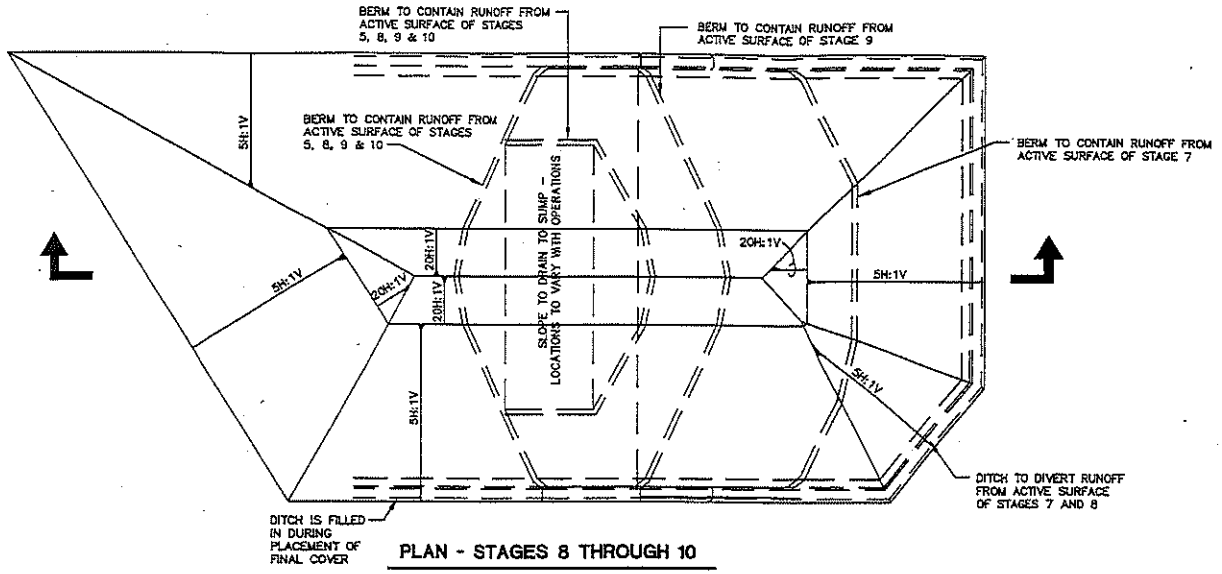
FOR: Chemical Waste Management, Inc.
Oak Brook, Illinois 60521

PROJECT: LAKE CHARLES FACILITY
EPA I.D. LAD000777201

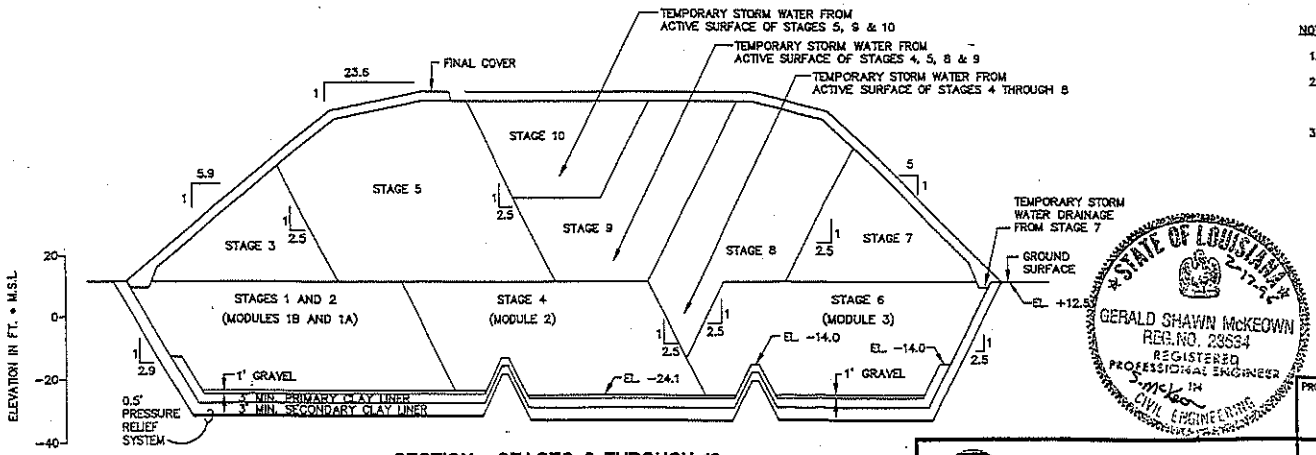
CELL 7
TYPICAL OPERATIONAL SEQUENCES 5 THROUGH 7

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	DP	SCALE	AS SHOWN	DWG. NO.	740
REVIEWED	SM	FILE NO.	853-3197	FIGURE NO.	26

000625



PLAN - STAGES 8 THROUGH 10



SECTION - STAGES 8 THROUGH 10

SCALE IN FEET
0 200 400
VERTICAL SCALE EXAGGERATED 5X

NOTES:

1. OPERATIONAL SEQUENCES SHOWN ARE CONCEPTUAL IN NATURE.
2. THE LOCATIONS OF THE RUN OFF DIVERSION BERMS AND DITCHES MAY VARY FROM THOSE SHOWN DEPENDING ON THE ACTUAL SEQUENCE OF WASTE PLACEMENT OPERATIONS.
3. HAUL ROADS FOR WASTE PLACEMENT ACCESS ARE NOT SHOWN FOR CLARITY. THE LOCATIONS, LINES AND GRADES WILL VARY WITH EACH OPERATIONAL STAGE.

STATE OF LOUISIANA
GERALD SHAWN McKEOWN
REG. NO. 23884
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING

Golder Associates Houston, Texas

FOR: Chemical Waste Management, Inc. Oak Brook, Illinois 60521

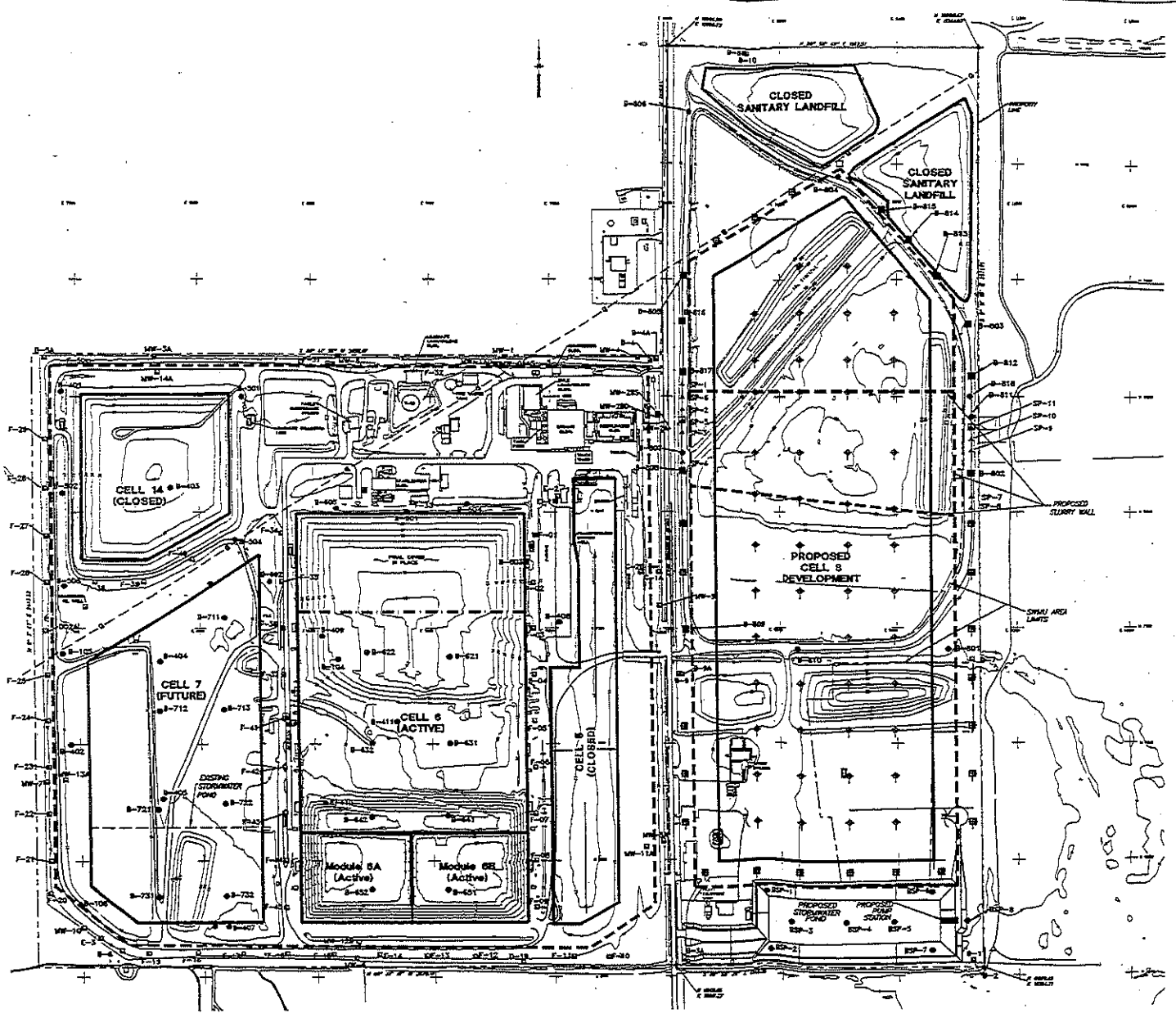
PROJECT: LAKE CHARLES FACILITY
EPA I.D. NUMBER LAD000777201

CELL 7
TYPICAL OPERATIONAL SEQUENCES 8 THROUGH 10

DRAWN	dhg	DATE	JANUARY 1995	JOB NO.	933-4177
CHECKED	DP	SCALE	AS SHOWN	DWG. NO.	741
REVIEWED	GSM	FILE NO.	853-3197	FIGURE NO.	27

ATTACHMENT 12

CONCEPTUAL DESIGN DRAWINGS FOR CELL 8



000625

NOTICE:

CONCEPTUAL DESIGN DRAWING; SUBJECT TO APPROVAL BY THE ADMINISTRATIVE AUTHORITY

LEGEND

- FENCELINE
- SLURRY WALL LOCATION
- DISPOSAL CELL LIMITS
- PROPERTY LINE
- HIGH PRESSURE GAS PIPELINE
- ABANDONED OIL WELL
- SWMU AREA LIMITS
- B-907 ● COMPLETED BORING LOCATION AND NUMBER
- SP-3 ▲ COMPLETED PIEZOMETER LOCATION AND NUMBER
- MW-4 ⊡ EXISTING MONITOR WELL
- MW-1 ⊡ EXISTING PIEZOMETER WELL
- PROPOSED BORING LOCATION
- PROPOSED MONITOR WELL LOCATION

NOTE:
1. THE GEOTECHNICAL INVESTIGATION BORINGS AND GROUNDWATER MONITORING WELLS WILL BE INSTALLED IN FIVE STAGES AS DESCRIBED BELOW. THE PROPOSED BORING LOCATIONS SHOWN INDICATE A PORTION OF THE STAGE I BORINGS ALONG THE PERIMETER OF MODULES 1 AND 2.

STAGE	GENERAL SCOPE OF WORK
STAGE I	PERIMETER GEOTECHNICAL BORINGS AROUND MODULES 1 AND 2.
STAGE II	INTERIOR GEOTECHNICAL BORINGS WITHIN MODULES 1 AND 2.
STAGE III	PERIMETER GROUNDWATER MONITOR WELLS AROUND MODULES 1 AND 2.
STAGE IV	PERIMETER AND INTERIOR GEOTECHNICAL BORINGS ON REMAINING MODULES. INSTALLATION SEQUENCED IN ACCORDANCE WITH MODULE CONSTRUCTION.
STAGE V	PERIMETER GROUNDWATER MONITOR WELLS ON REMAINING MODULES. INSTALLATION SEQUENCED IN ACCORDANCE WITH MODULE CONSTRUCTION.

NAMES		DATE
DR.	JMDS	8/95
DSGN.	RICHARDSON	8/95
CK.	KENDRICK	10/95
PE.	RICHARDSON	10/95
REV.	0	10/95
Project No.		33043.100
CAD File No.		33043.DWG

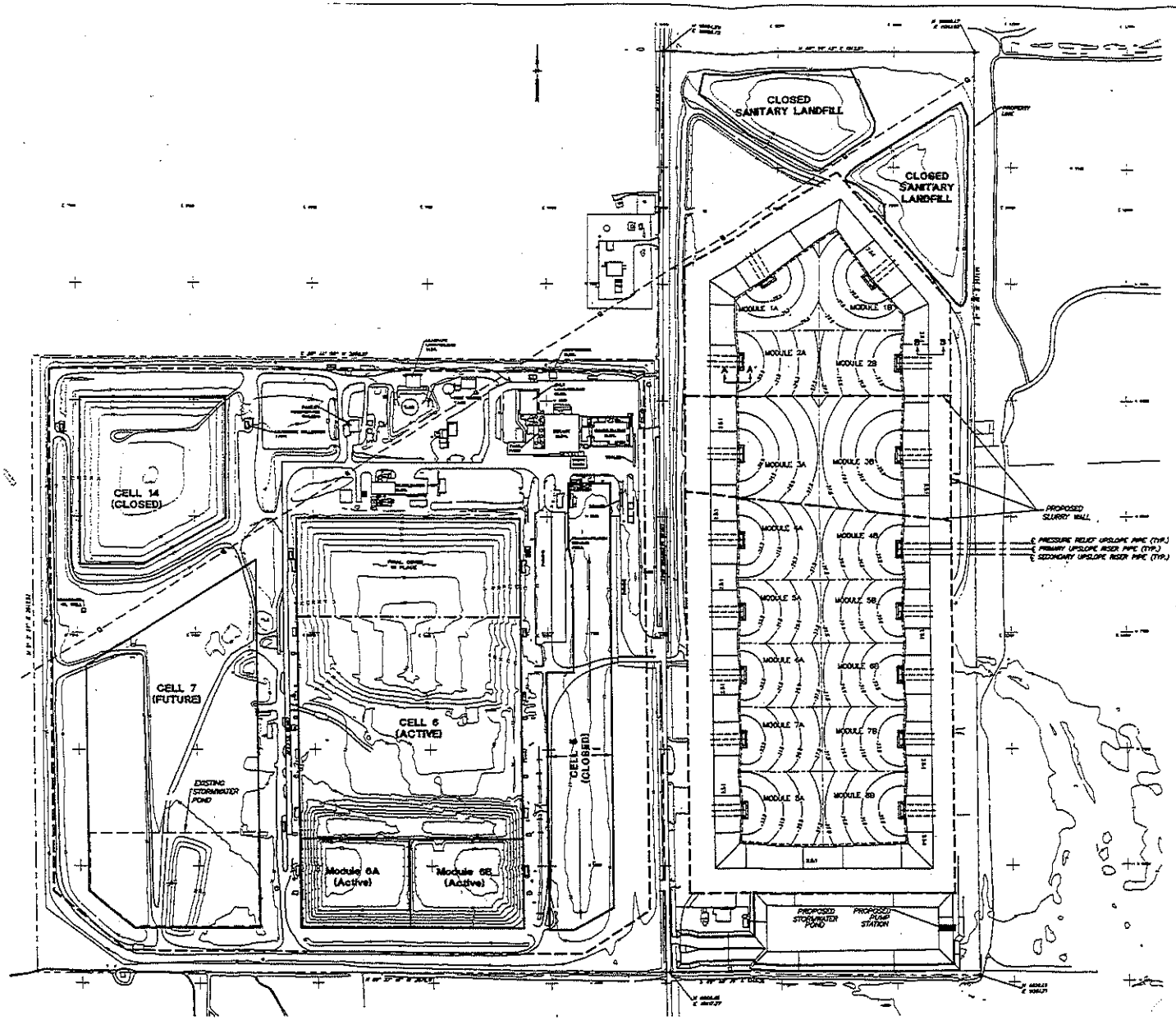
RUST ENVIRONMENT & INFRASTRUCTURE

CELL 8 CONCEPTUAL DESIGN DRAWINGS
CHEMICAL WASTE MANAGEMENT, INC.
LAKE CHARLES FACILITY
CARLYSS, LOUISIANA
EPA I.D. NO. LAD000777201
PROJECT TITLE

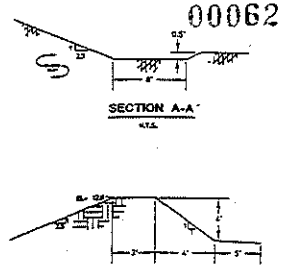
CHEMICAL WASTE MANAGEMENT, INC.
CLIENT

CELL 8
BORING AND MONITOR 802

RE: BASE MAP PROVIDED BY CHEMICAL WASTE MANAGEMENT, INC., AND BASED



000627



NOTICE:

CONCEPTUAL DESIGN DRAWING; SUBJECT TO APPROVAL BY THE ADMINISTRATIVE AUTHORITY

LEGEND

- FENCELINE
- SLURRY WALL LOCATION
- DISPOSAL CELL LIMITS
- PROPERTY LINE
- HIGH PRESSURE GAS PIPELINE
- ABANDONED OIL WELL

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO NATIONAL GEODETIC VERTICAL DATUM (NGVD), FORMERLY MEAN SEA LEVEL.
2. THE MODULE ELEVATIONS SHOWN REPRESENT THE UPPERMOST SURFACE OF THE EXCAVATION.
3. THIS PLAN IS CONCEPTUAL. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.

NAMES	DATE
DR. PARTIN	11/94
DSGN. RICHARDSON	11/94
CK. MENDRICK	10/95
PE RICHARDSON	10/95
REV. 0	10/95
Project No.	22043.100
CAD File No.	22043.DWG

RUST ENVIRONMENT & INFRASTRUCTURE

CELL 8 CONCEPTUAL DESIGN DRAWINGS
CHEMICAL WASTE MANAGEMENT, INC.
LAKE CHARLES FACILITY
CAMERON, LOUISIANA
EPA I.D. NO. LAD000777201

PROJECT TITLE

CHEMICAL WASTE MANAGEMENT, INC.
CLIENT

CELL 8
EXCAVATION PLAN

303
DWG. NO

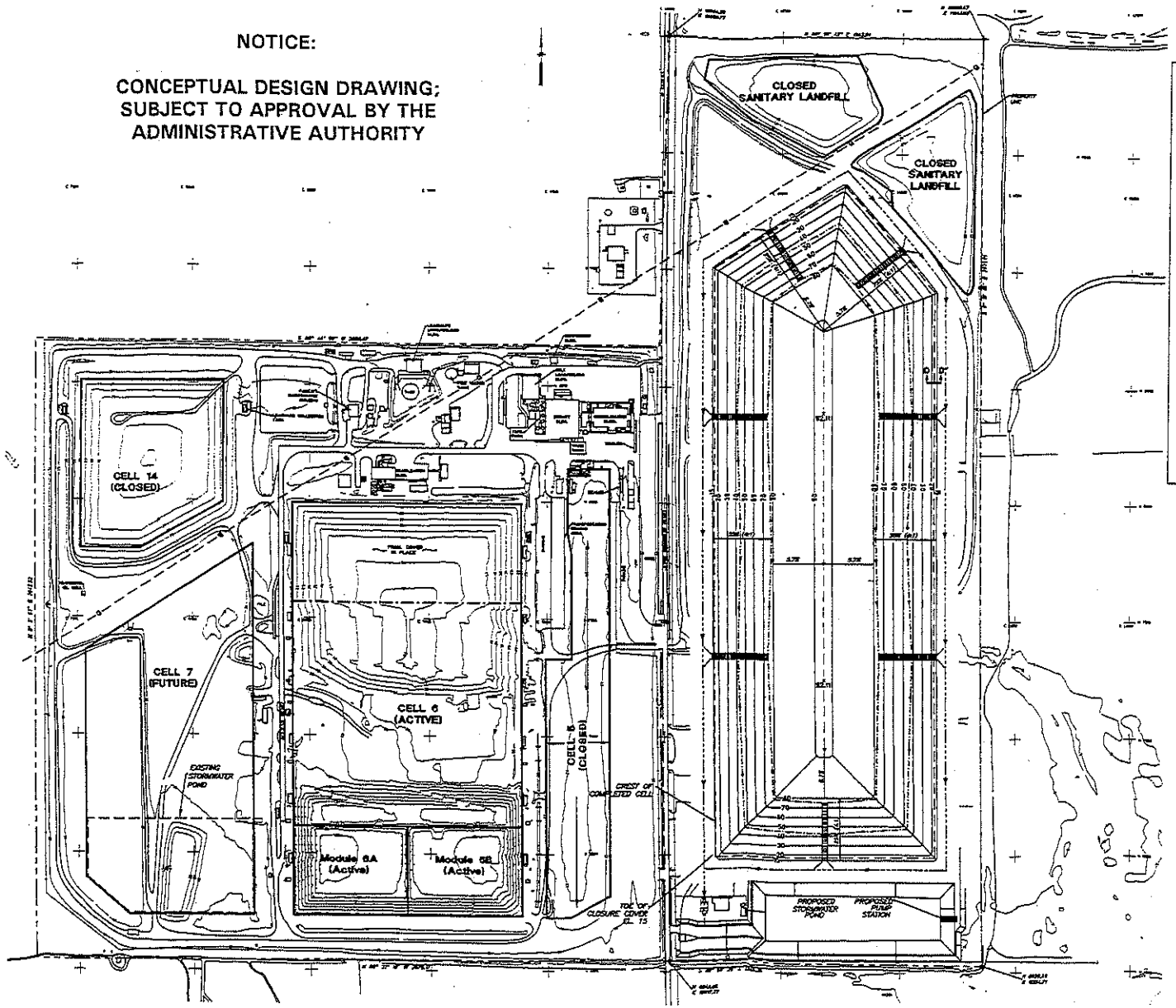
CERTIFICATION

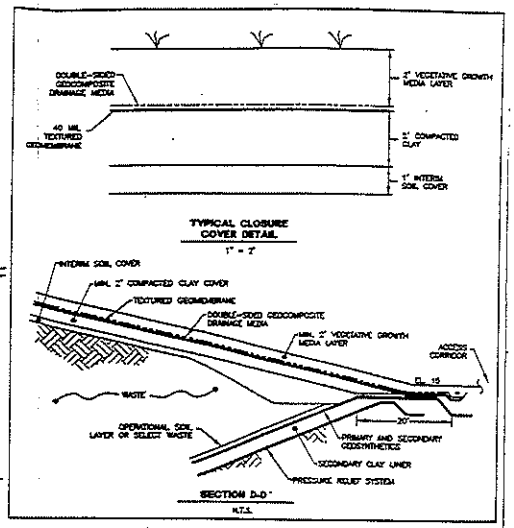
RE: BASE MAP PROVIDED BY CHEMICAL WASTE MANAGEMENT, INC., AND BASED ON AERIAL SURVEY PERFORMED ON 1/24/93.

NOTICE:

CONCEPTUAL DESIGN DRAWING;
SUBJECT TO APPROVAL BY THE
ADMINISTRATIVE AUTHORITY

000628





LEGEND

- FENCELINE
- DISPOSAL CELL LIMITS
- PROPERTY LINE
- HIGH PRESSURE GAS PIPELINE
- ABANDONED OIL WELL
- RUNOFF LETDOWN CHUTE
- RUNOFF DIVERSION BERM LOCATION
- EXTERIOR PERIMETER (CLEAN STORMWATER) RUN-OFF DITCH LOCATION AND FLOW DIRECTION

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO NATIONAL GEODETIC VERTICAL DATUM (NGVD).
2. THE ELEVATIONS SHOWN REPRESENT THE UPPERMOST SURFACE OF THE FINAL COVER VEGETATIVE GROWTH MEDIA LAYER.
3. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
4. SEE DRAWING NO. 812 FOR SURFACE WATER MANAGEMENT PLAN AND DETAILS.

RE: BASE MAP PROVIDED BY CHEMICAL WASTE MANAGEMENT, INC., AND BASED ON AERIAL SURVEY PERFORMED ON 1/24/92.

NAMES	DATE
DR. PARISH	11/94
DSGN. RICHARDSON	11/94
CK. MCKINNON	10/95
PC. RICHARDSON	10/95
REV. 0	10/95
Project No.	32043.100
CAD File No.	32043.DWG

RUST ENVIRONMENT & INFRASTRUCTURE

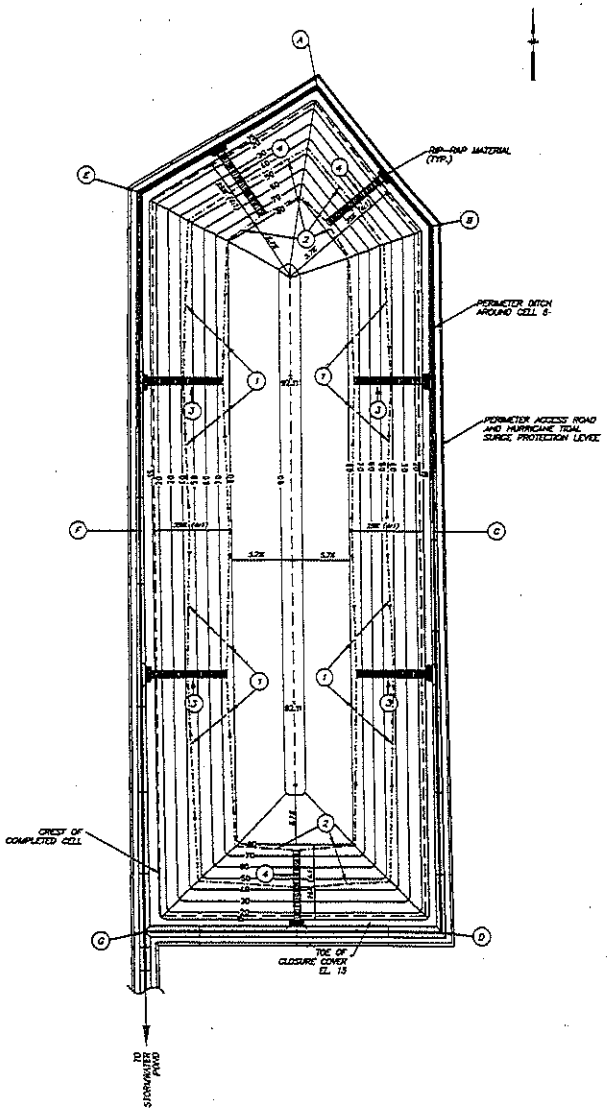
CELL 8 CONCEPTUAL DESIGN DRAWINGS
CHEMICAL WASTE MANAGEMENT, INC.
LAKE CHARLES FACILITY
CARLYSS, LOUISIANA
EPA I.D. NO. LAD000777201
PROJECT TITLE

CHEMICAL WASTE MANAGEMENT, INC.
CLIENT

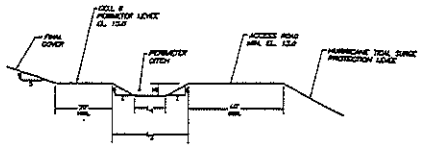
CELL 8
CLOSURE COVER

811

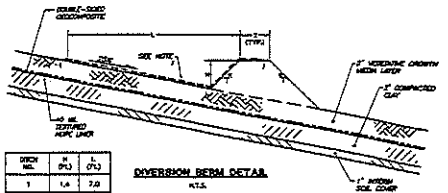
000629



PERIMETER DITCH			
DITCH SECTION	H (FT.)	L1 (FT.)	L2 (FT.)
A	1.1	3	13.4
B	1.6	5	18.2
C	2.0	5	21.0
D	4.4	5	36.8
E	1.8	5	18.2
F	3.5	5	23.0
G	3.4	5	30.4

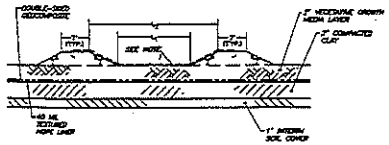


EXTERIOR PERIMETER CLEAN STORMWATER RUN-OFF DITCH DETAIL
N.T.S.



DITCH NO.	H (FT.)	L (FT.)
1	1.4	7.0
2	1.0	5.0

DIVERSION BERM DETAIL
N.T.S.



CHUTE NO.	H (FT.)	L1 (FT.)	L2 (FT.)
3	0.3	5	7
4	0.3	3	5

RUNOFF CHUTE DETAIL
N.T.S.

DETAIL NOTES:

1. RUNOFF CHUTES AND DIVERSION BERMS WILL BE LINED WITH EROSION CONTROL MATERIAL.
2. ALL DIVERSION BERMS LOCATED ON 25% SLOPE SHALL PROVIDE A MINIMUM GRADE OF 1% FOR DRAINAGE ACROSS THE SLOPE.

LEGEND

RUNOFF LETDOWN CHUTE

RUNOFF DIVERSION BERM LOCATION

NOTICE:

CONCEPTUAL DESIGN DRAWING; SUBJECT TO APPROVAL BY THE ADMINISTRATIVE AUTHORITY

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO NATIONAL GEODETIC VERTICAL DATUM 1929(V).
2. THE ELEVATIONS SHOWN REPRESENT THE UPPERMOST SURFACE OF THE FINAL COVER VEGETATIVE GROWTH MEDIA LAYER.
3. THIS PLAN IS CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THOSE SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.

NAMES	DATE
DR. PARISH	11/94
DSGN. LEBLANC	11/94
CK. RICHARDSON	10/95
PE RICHARDSON	10/95
REV. 2	10/95
Project No. 32043.100	
CAD File No. 32043DRW.DWG	

RUST ENVIRONMENT & INFRASTRUCTURE

CELL 8 CONCEPTUAL DESIGN DRAWINGS
CHEMICAL WASTE MANAGEMENT, INC.
LAKE CHARLES FACILITY
CALCASIEU, LOUISIANA
EPA I.D. NO. LAD000777201
PROJECT TITLE

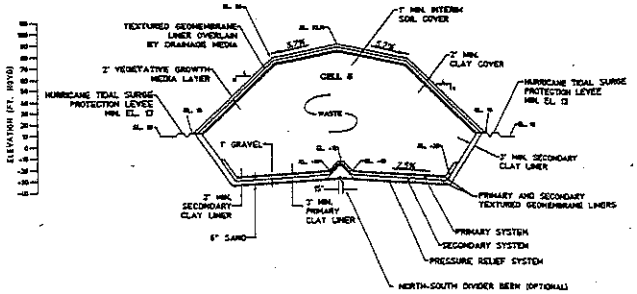
CHEMICAL WASTE MANAGEMENT, INC.
CLIENT

CELL 8
SURFACE WATER MANAGEMENT PLAN

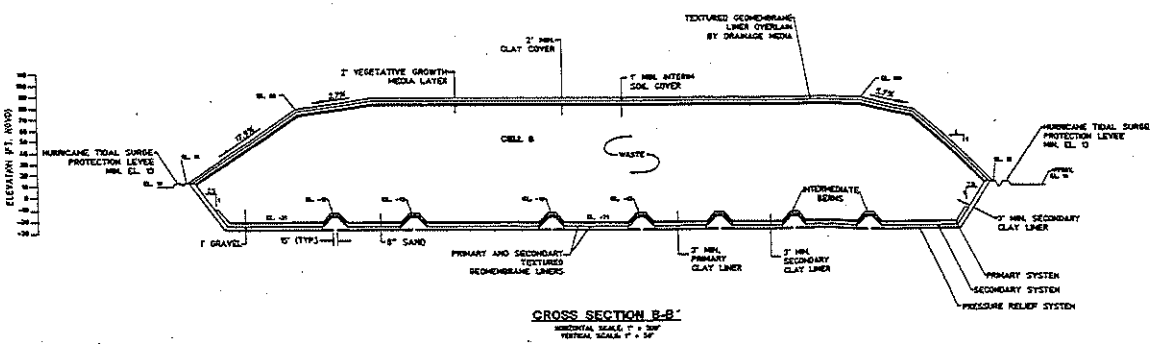
812
DWG. NO.

CERTIFICATION

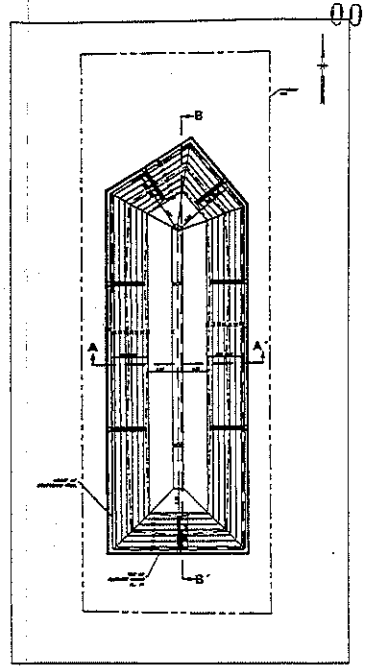
000630



CROSS SECTION A-A'



CROSS SECTION B-B'



SECTION LOCATION MAP

NOTICE:

CONCEPTUAL DESIGN DRAWING; SUBJECT TO APPROVAL BY THE ADMINISTRATIVE AUTHORITY

NOTES:

1. ALL ELEVATIONS ARE IN FEET RELATIVE TO NATIONAL GEODETIC VERTICAL DATUM (NGVD).
2. THE ELEVATIONS SHOWN ON THE COVER REPRESENT THE UPPERMOST SURFACE OF THE FINAL COVER VEGETATIVE GROWTH MEDIA LAYER.
3. THESE CROSS SECTIONS ARE CONCEPTUAL IN NATURE. THE ACTUAL CONSTRUCTION LOCATIONS, ELEVATIONS, AND DETAILS MAY VARY FROM THAT SHOWN. DETAILED DRAWINGS WILL BE DEVELOPED PRIOR TO CONSTRUCTION.
4. THE NORTH-SOUTH DIVIDER BERMS SHOWN ARE OPTIONAL.
5. AN OPERATIONAL LAYER CONSISTING OF SOIL OR SELECT WASTE MATERIAL WILL BE INSTALLED OVER THE COMPLETED MODULE AREA, PRIOR TO WASTE PLACEMENT.

NAMES	DATE
DR. PARSON	11/94
DSGN. BOUDWIN	11/94
CK. RICHARDSON	10/95
PE RICHARDSON	10/95
REV. 0	10/95
Project No. 32043.100	
CAD File No. 32043-CSDWG	

RUST ENVIRONMENT & INFRASTRUCTURE

CELL 8 CONCEPTUAL DESIGN DRAWINGS
CHEMICAL WASTE MANAGEMENT, INC.
LAKE CHARLES FACILITY
CARLISLE, LOUISIANA
EPA I.D. NO. LAD000777201
PROJECT TITLE

CHEMICAL WASTE MANAGEMENT, INC.
CLIENT

CELL 8
LANDFILL
CROSS SECTIONS

313

ATTACHMENT 13

DIOXIN MANAGEMENT PLAN

ATTACHMENT 13

DIOXIN MANAGEMENT PLAN

DIOXIN MANAGEMENT PLAN

1. The Permittee shall maintain a plan to manage dioxin containing wastes pursuant to LAC33.V.2523 and 40 CFR 264.317.

2. The facility's management plan summary is as follows:

   a. CWMI is authorized to receive Hazardous Waste Codes F020, F021, F022, F023, F026, F027 and F028 as well as F039.

   b. All ash with dioxin codes will have been treated by incineration in an approved incinerator meeting the requirements of 40 CFR 264,343(a)(2) and LAC33:V.3111.A.2.

   c. All ash with dioxin codes will have been treated to meet the standards of 40 CFR 268.41 Table CCWE and LAC33:V.Chapter 22 Table 2.

   d. All ash will be accompanied by a hazardous waste manifest and waste certification signed by the generator stating the ash has been properly treated and meets the treatment standards for dioxin waste codes.

   e. The waste will be stored in tanks or containers as per LAC33:V.4437.A.2.

   f. The landfill design meets the requirements of 40 CFR 264 Subpart N and LAC33:V.2503.K and LAC33:V.4512.A.

3. This management plan is written pursuant to LAC33:v.2523 and 40 CFR 264.317 Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026 and F027 which is a requirement for permitted hazardous waste facilities.

   The CWMI - Lake Charles Facility is authorized pursuant to state and federal laws to treat, store and dispose of hazardous waste. The principal activities at the existing site involve treatment and land disposal of hazardous waste. The facility is located on a 280 acre property owned by CWMI which is approximately eight-miles south-southwest of Sulphur, Louisiana near Carlyss in Calcasieu Parish. The facility address is 7170 John Brannon Road.

   CWMI will receive containerized incinerator ash (baghouse dust and slag) which may be coded with one or a combination of the F020-F023, F026-F028 waste codes. The incinerators generating the ash must meet the requirements of 40 CFR 264.343(a)(2) and LAC33:V.3111.A.2; i.e., 99.9999 percent destruction and removal efficiency (DRE). The ash from the incinerator must meet the treatment standards for dioxin containing waste codes F020-F-23, F026-F028 required for land disposal before CWMI - Lake

Charles will accept the ash for disposal. These treatment standards are listed in 40 CFR 268.41 Table CCWE and LAC33:V.Chapter 22 Table 2.

Each shipment will be accompanied by a hazardous waste manifest and waste certification signed by the generator stating that the ash has been treated to meet the treatment standard for each dioxin code listed for the shipment. CWMI - Lake Charles will not perform any treatment on the ash to meet the treatment standards for the dioxin waste codes.

However, it should be noted that the incinerator ash may require additional treatment for waste codes. This treatment may be performed at CWMI - Lake Charles before the ash is landfilled. For example, the ash may require treatment using stabilization to meet a metal treatment standard before it can be landfilled.

As stated previously, after incineration of dioxin waste codes, the resulting incinerator ash will contain less than one part per billion (<1 ppb) of the dioxing constituents listed for each dioxin waste code. Also the required 99.9999 percent DRE for the incinerator operation will destruct other organic constituents that may have been in the original waste stream. The resulting ash will contain very small amounts of dioxin which is extractable (0.00064 oz/20 tons). The combination of extremely small amount of extractable dioxin remaining in the residue and the similarly small amount of organics available for extraction in the ash minimize the mobilization of the dioxin by constituents in the ash. Similarly other hazardous wastes which are listed or characteristic because of organics have treatment standards which require treatment to a standard before landfill disposal is permitted. The treatment standards as listed by EPA and LaDEQ were based on a safe level of exposure for land disposal.

The ash will be disposed in landfill cells at CWMI - Lake Charles which meet the minimum design standards for a Class C Hazardous Waste Landfill. This is a double composite liner design incorporating a 60 mil HDPE liner and three feet of clay with associated drainage networks in each composite layer. Leachate collection is automated and surface water pumps are used to remove ponded water from the landfill surface after rainfall accumulation. A similar collection system removes liquid from the secondary collection system. All liquids (surface water, leachate and secondary containment) removed from the cell are disposed in off-site underground injection wells. In addition, a forty foot deep slurry wall encircles the facility perimeter on the west side of John Brannon Road which includes the landfills.

In summary, the very small amount of dioxins in the ash, the increased incineration DRE reducing the organics in the ash, the limited levels of organics permitted in other landfill waste codes, the prohibition on landfilling of liquid waste, the landfill design and the offsite disposal of all liquids generated in the landfill each contribute to minimizing the possibility of dioxin exposure.

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	1
REFERENCE:	January 28, 1996 correspondence from Michael Tritico.
ISSUE:	Continued operation under Interim Status.
COMMENT:	You have allowed Chemical Waste Management Inc. (CWMI) to continue to operate under the almost non-existent rules that predated the August 1989 date of the beginning of the Louisiana Hazardous Waste Management Plan.
LDEQ RESPONSE:	During the course of the permit appeal, CWMI's Carlyss facility has been regulated under the interim status standards found in Louisiana's hazardous waste regulations. Louisiana's interim status standards are based directly on the federal interim status standards found at 40 CFR 265. These standards have been in place since 1980 and are used to regulate hazardous waste treatment storage and disposal facilities across the nation. Far from non-existent, interim status standards generally track the requirements that are ultimately imposed on permitted facilities. These requirements include financial assurance, waste analysis, emergency preparedness and prevention, personnel training, and groundwater monitoring. Interim status standards were designed to govern the operation of hazardous waste treatment, storage, and disposal facilities until these facilities obtained final permits. Finalization of this settlement will result in the issuance of a final hazardous waste operating permit to CWMI allowing the LDEQ even greater regulatory control over the facility.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	2
REFERENCE:	January 28, 1996 correspondence from Michael Tritico.
ISSUE:	Intervenors were not allowed to comment on changes to the permit.
COMMENT:	You appear to be allowing modifications to the proposed permit that go beyond what Intervenors were allowed to address during the hearings.
LDEQ RESPONSE:	To properly regulate CWMI's Carlyss facility under a hazardous waste operating permit, it is necessary to ensure that the operating permit accurately reflects conditions at the facility. The current draft permit has been revised to include items addressed in the 1989 permit as well as those changes made to the facility since the permit was appealed. All of these changes made during the permit appeal process were in accordance with the regulations governing interim status facilities and approved by the LDEQ. In an effort to ensure that the public was allowed the opportunity to address the current version of the draft permit, the LDEQ issued a copy of the draft permit for public review and comment.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	3
REFERENCE:	January 28, 1996 correspondence from Michael Tritico.
ISSUE:	Groundwater disputes.
COMMENT:	The proposed settlement agreement is said to resolve groundwater disputes raised on appeal. Intervenor's were limited on addressing certain groundwater issues and we were not ever invited to any of the settlement negotiations, therefore, as far as I am concerned, the groundwater issues remain unresolved.
LDEQ RESPONSE:	The proposed Settlement Agreement is the result of negotiations between LDEQ and CWMI to resolve groundwater issues and other issues, pursuant to an October 27, 1989 decision by the First Circuit Court of Appeal. This decision remanded the permit for settlement by negotiation between the LDEQ and CWMI.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 4

REFERENCE: January 28, 1996 correspondence from Michael Tritico.

ISSUE: Buried river channel

COMMENT: One such issue was the buried river channel which traverses the existing landfill area from the northwest to the southeast, as we got one of CWMI's experts to testify from one of our U-2 infra-red aerial photographs fifteen years ago. That expert indicated that the channel's surface manifestation could be seen crossing John Brannon Road and going beneath the company property on the east side of the road. (Unless you have lost that USGS/NASA Certified Exhibit, you will still be able to see the buried river channel. It has not gone away.)

LDEQ RESPONSE: The site-specific geologic, stratigraphic and hydrogeologic conditions at the CWMI facility have been studied and documented by numerous geotechnical and hydrogeologic investigations. Additional borings, at 200 foot intervals, must be advanced in the Cell 8 development area prior to consideration and subsequent approval of a final detailed design for construction of Cell 8.

All required geologic, geotechnical and hydrogeologic data will be thoroughly evaluated by LDEQ prior to consideration and subsequent approval of a final design for Cell 8. At a minimum, Cell 8 will be constructed with a double composite liner system (with 2 synthetic and 2 recompacted clay liners), leachate collection and leak detection and removal systems, encompassing slurry wall, and will be hydrologically isolated from any stratigraphic units which may provide a preferential pathway for the migration of contaminants. In addition, monitoring wells will be installed in the "60-foot Sand" and the "Channel Sand" to monitor Cell 8 and to assess the integrity of the slurry wall. Proposed permitted requirements for design and construction of landfill cells is addressed in Section VIII of the proposed "Operating Permit".

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	5
REFERENCE:	January 28, 1996 correspondence from Michael Tritico.
ISSUE:	Interconnectivity of pervious strata.
COMMENT:	Various pervious strata are hydraulically- interconnected vertically. If one stratum becomes contaminated, the poison will spread to the others.
LDEQ RESPONSE:	Vertical interconnection does exist between permeable strata at the CWMI facility. This situation is common and is to be expected in fluvial sedimentary environments throughout the state of Louisiana. However, in order for downward vertical migration of groundwater to occur, a downward potentiometric gradient is required. Indeed, at the CWMI facility an upward vertical gradient exists. These hydrogeologic conditions tend to further reduce the possibility of any vertical migration of contaminants in the subsurface. Additionally, Landfill Cells 14, 6, 7, and 8 incorporate double composite liner systems (2 synthetic and 2 recompacted clay liners), Leachate Collection and Removal Systems, Leak Detection and Removal Systems, and an extensive groundwater monitoring system in order to ensure protection of human health and the environment.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 6

REFERENCE: January 28, 1996 correspondence from Michael Tritico.

ISSUE: Intermixing of groundwater from various pervious strata.

COMMENT: We have seen evidence that some of the tombs [landfills] and the mixing areas have leaked contaminants into the shallow groundwater. We saw it in data available for the first hearing and we have seen more incriminating data since then.

We had testimony that salt from the Strategic Petroleum Reserve disaster was placed in the old cell and that such salt would cause an upward movement of water into the tomb, requiring vigorous removal of the leachate. That has happened, yet the Louisiana Department of Environmental Quality (DEQ) has not made the company remove the salt.

Instead, the company is being allowed to try something called a pressure relief system that was not talked about during the hearings and the company is being allowed to build the tombs much higher than the height that we were allowed to discuss during the adjudicatory hearings. If the extra height is an experimental technique for trying to slow the upward movement of the water table into the bases of the tombs, why is that not admitted and why has not DEQ required demonstration that such an approach will work without unexpected side effects, such as displacement of forces laterally to such a degree that the slurry wall will be ruined and the famous Gerald Walter "inward gradient" will be even more ludicrous than just a joke.

LDEQ RESPONSE: As evidenced by the results of groundwater monitoring at the CWMI facility, conducted pursuant to the Louisiana Hazardous Waste Regulations, no impact to groundwater at the CWMI facility has been documented. Additionally, there is no evidence that the presence of salt within the landfill cell would contribute to an "upward movement of water into the tomb (*sic*)".

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

The pressure relief systems are constructed for the purpose of hydrologic control during construction of the landfill cells and have no impact on the production of leachate within the cells.

Final design configuration for Cells 6 and 7 were altered as changes under Interim Status pursuant to the Louisiana Hazardous Waste Regulations; these changes have no impact on groundwater movement. LDEQ approvals of these changes were based on review of detailed designs and calculations submitted to LDEQ by CWMI in order to ensure the integrity and long-term stability of the landfill cells and ensure protection of human health and the environment.

Preliminary geotechnical and hydrogeologic investigations have been performed for the Cell 8 development area and a conceptual design has been proposed. Additionally, a detailed geotechnical boring program, with borings at 200-foot intervals, will be required before the development of the detailed design for Cell 8. All required geologic, geotechnical, and hydrogeologic data will be thoroughly evaluated by LDEQ prior to consideration and subsequent approval of a final design for Cell 8.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 7

REFERENCE: January 28, 1996 correspondence from Michael Tritico.

ISSUE: Suitability of site levees.

COMMENT: Page 14 of exhibit 1 says that levees must be certified (by an independent Louisiana registered engineer) as capable of protecting the site from washouts, wave action, soil erosion, etc. I saw no such certification in the materials available for review.

More importantly, I think that no reputable engineer would give such a certification if he read the transcript of the adjudicatory hearing testimony of Dr. Shea Penland. Dr. Penland presented the National Hurricane Center's SLOSH Model computerized projections for what would happen at the site under various storm scenarios. It did not even take a category 4 or 5 storm to send the Gulf into the site. It was obvious from the model that a category 4 or 5 storm would tear the tomb walls and caps apart and spread hazardous all the way to Interstate 10 in Sulphur and Vinton, where the Gulf's water would not only have reached inland, but also would have risen to 27 feet above sea level at I-10, miles north of the site.

With the site five feet above sea level, sitting in a drained coastal marsh, how high would the levees have to be and how wide at their bases? We tried to ask that question during the hearing, but the hearing officer would not let us pursue the issue. What engineer has addressed it and certified that our concerns are pointless?

LDEQ RESPONSE: CWMI addressed floodplain protection and levee design in their Louisiana Hazardous Waste Regulations Part II Application, Volume V Appendix 31, submitted on January 11, 1988. In this appendix, a levee stability analysis report for the site was performed by Woodward Clyde Consultants. The LDEQ determined that the levee design was satisfactory and exceeded recommended safety factors for a 100-year flood, including the effects of wave action.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	8
REFERENCE:	January 28, 1996 correspondence from Michael Tritico.
ISSUE:	Deny the Settlement Agreement.
COMMENT:	Since you have not conducted the Settlement Negotiations in a way that protects the legal rights of the public you therefore must not proceed with the Settlement as it is written. You must either deny the permit or rewrite the agreement or reconvene the adjudicatory hearings.
LDEQ RESPONSE:	The LDEQ disagrees with the commentor's assertions that the legal rights of the public have not been protected. The resolution of the dispute between CWMI and LDEQ places CWMI's Carlyss facility under a final and enforceable hazardous waste operating permit. This permit is fully protective of human health and the environment.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 9

REFERENCE: January 29, 1996 correspondence from Marvin L. Harger.

ISSUE: Objection to lack of public participation in the settlement agreement process.

COMMENT: I object to the Settlement Agreement between DEQ and CWMI. Although intervenors asked to be included in any discussions between DEQ and CWMI, we were never notified of any meetings to be held. We intervenors attended hearing conferences as well as days of hearings and other conferences during the hearing. When the hearing was concluded, a permit was legally issued by DEQ. The same subject matter was addressed in the hearings as those in most of the settlement agreement. While DEQ apparently covered their legal requirement by soliciting public input, they stopped short of allowing that input in its entirety, by changing many of the items issued in the permit without that public input, as well as adding many items during the negotiations (hearings) with CWMI, without the public input they had solicited. This not only cost us time, effort and money, but did not allow us to participate in all of the hearings. I thought we had a "Sunshine Law" in the state of Louisiana, or was that another pipe dream?

I think the DEQ is remiss in its failure to carry out the duties and responsibilities as the supposed regulatory agency specifically set up to protect the Health and Environment of the citizens of Louisiana, and hereby request immediate correction of those failures by a denial of the settlement agreement

DEQ has a transcript of the 1988 hearings regarding the permit for CWMI. I will not bore you with the details, but suggest that the DEQ compare the permit issued as a result of those hearings with the Proposed Settlement Agreement, while keeping in mind that the hearing officer was empowered to only suggest changes to the Secretary of DEQ, and did not have the authority to dictate the permit or conditions that the Secretary had to agree with. Otherwise, he would have been a superior to the Secretary and probably would not have been employable by the Secretary. Nevertheless, it seems to me that CWMI was the one who paid for the services of the Hearing

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

Officer, although that procedure, I believe has been changed. Any additions made to that permit should either be deleted or conducted in hearings with the attendance of the intervenors present and allowed to participate, just as they did in the original part of the hearing.

LDEQ RESPONSE:

This settlement resolves CWMI's appeal of permit conditions imposed by the LDEQ in the (original) 1989 permit. Those parties who intervened in the hearings held prior to the issuance of the 1989 CWMI permit were not parties to this appeal.

In order to accomplish the ultimate resolution of CWMI's permit appeal, it was necessary to revise the final operating permit to reflect current conditions at the facility. Without these changes, the permit would have been an out-of-date and ineffective regulatory tool. All of the changes to the facility made during the permit appeal process and incorporated into the revised permit were made in accordance with LDEQ interim status regulations and approved by the Department.

Public input into the resolution of the appeal, including all provisions of the updated permit, was solicited by the LDEQ. As part of the settlement process, the LDEQ gave public notice of, and invited comments on, the proposed settlement agreement and accompanying draft permit.

ACTION:

The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 10

REFERENCE: January 29, 1996 correspondence from Marvin L. Harger.

ISSUE: CWMI is located in a floodplain.

COMMENT: DEQ continues to disregard their obligation to the health and environment of Louisiana citizens by allowing the continued alterations and expansions to the referenced CWMI facility at John Brannon Road, Carlyss, Calcasieu Parish, Louisiana (the Facility). That facility is located in an area that is forbidden by the United States Environmental Protection Agency (USEPA) regulations. Those regulations forbid the location of a hazardous waste treatment, storage, and disposal (TSD) facility as follows:

A TSD can not be located in a floodplain. The CWMI Carlyss site is in a floodplain, with portions of the site only five (5) feet above Mean Sea Level.

LDEQ RESPONSE: Federal and State hazardous waste regulations do not forbid the location of a TSD in a 100-year floodplain. However, special procedures must be followed if a facility is located in a floodplain. Specifically, LAC 33:V.517.T.2.b states:

"b. Owners and operators of facilities located in the 100-year floodplain must provide the following information:

i. the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, constructing, operating, or maintaining the facility to withstand washout from a 100-year flood;

ii. engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as a consequence of a 100-year flood;

iii. structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., floodwalls, dikes) at the facility and how these will prevent washout;

iv. if applicable, and in lieu of the above two provisions, a detailed description of procedures to be followed to remove hazardous waste to safety before the facility is flooded, including:

v. timing of such movement relative to flood levels, including estimated time to move the waste, showing that such movement can be completed before floodwaters reach the facility;

vi. a description of the location(s) to which the waste will be moved and demonstration that those facilities will be eligible to receive hazardous waste in accordance with LAC 33:V.Subpart 1;

vii. the planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use; and

viii. the potential for accidental discharges of the waste during movement."

CWMI has addressed this regulation by constructing a perimeter levee system around the facility. The design requirements for this levee system were addressed in CWMI's Louisiana Hazardous Waste Regulations Part II Application, Volume V, Appendix 31, submitted on January 11, 1988. The information provided adequately demonstrates compliance with LAC 33:V.517.T.2.b.

In addition, the LDEQ addressed these concerns in the draft permit. Section II.H.2 of the draft permit states:

"The permittee shall not place any hazardous waste unit on any portion of the property that lies within the 100 year floodplain (as identified in the Flood Insurance Rating Map) unless such areas are raised above this flood level or other means (e.g., levees) are provided to protect such areas from washouts, overtopping by wave action, soil erosion or other effects of such a flood as required by LAC 33:V.1503.B.3. Such site improvements shall be certified by an independent Louisiana registered engineer and approved by LDEQ

prior to any hazardous waste and/or hazardous waste facilities being placed thereon."

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

000650

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	11
REFERENCE:	January 29, 1996 correspondence from Marvin L. Harger.
ISSUE:	CWMI is located in an area where irrigation canals occur.
COMMENT:	DEQ continues to disregard their obligation to the health and environment of Louisiana citizens by allowing the continued alterations and expansions to the referenced CWMI facility at John Brannon Road, Carlyss, Calcasieu Parish, Louisiana (the Facility). That facility is located in an area that is forbidden by the united States Environmental Protection Agency (USEPA) regulations. Those regulations forbid the location of a hazardous waste treatment, storage, and disposal (TSD) facility as follows: A TSD cannot be located in an area where irrigation canals occur. (The CWMI Carlyss site is so located.) In fact, a 500 foot deep, 10 inch diameter irrigation well with canals is located within 100 feet of the southern boundary, down gradient, of the site.
LDEQ RESPONSE:	Neither State nor Federal hazardous waste regulations forbid the location of a TSD in an area where irrigation canals occur.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 12

REFERENCE: January 29, 1996 correspondence from Marvin L. Harger.

ISSUE: CWMI is located in an area where active faulting occurs.

COMMENT: DEQ continues to disregard their obligation to the health and environment of Louisiana citizens by allowing the continued alterations and expansions to the referenced CWMI facility at John Brannon Road, Carlyss, Calcasieu Parish, Louisiana (the Facility). That facility is located in an area that is forbidden by the united States Environmental Protection Agency (USEPA) regulations. Those regulations forbid the location of a hazardous waste treatment, storage, and disposal (TSD) facility as follows:

A TSD cannot be located in an area where active faulting occurs. The CWMI Carlyss site is located almost directly (if not directly) above a portion of a fault named the "Lake Arthur Fault" and shown on most geologic maps of this area. Although CWMI claimed that the fault is not active, an earthquake occurred on the fault in 1984, with an epicenter approximately two (2) miles from the CWMI site. While the Richter scale of 2.8 is not considered to be dangerous, it did demonstrate that "active faulting" occurs here. It may not compare to quakes in the San Andreas fault, it does demonstrate activity.

LDEQ RESPONSE: The Louisiana Hazardous Waste Regulations prohibit the location of a TSD facility within 200 feet of a fault which has had displacement in Holocene time. The fault in question is a deep subsurface fault which occurs almost 3000 feet south of the CWMI facility and does not extend to the shallow subsurface. Documentation of compliance with the seismic standard has been submitted to LDEQ by CWMI pursuant to the permitting process and settlement negotiations.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

000652

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 13

REFERENCE: January 29, 1996 correspondence from Marvin L. Harger.

ISSUE: The LDEQ should have limited CWMI to original permitted limits.

COMMENT: While the CWMI site at Carlyss may have been considered to be "Grandfathered in", continued expansion should not be allowed. For example, CWMI had indicated in prior permit applications that the site would have a lifetime of only 21 years, with an average of 100,000 tons per year of waste deposits. DEQ has allowed an increase of elevation of deposition of waste from two (2) feet below ground surface to be increased to almost 100 feet above ground surface. That allows a tremendous increase in the amount of wastes plus greater danger of erosion in an area that was already forbidden for TSD facilities. The least DEQ should have done was to allow only the original representations or estimations of amounts, depths and elevations.

LDEQ RESPONSE: CWMI's Carlyss facility was in existence prior to the implementation of the hazardous waste regulations. As a result the facility was granted interim status. Under this regulatory scheme the CWMI facility was, in a sense "grandfathered in." Interim status is not, however, intended simply to allow a limited continuation of activities that would otherwise be prohibited.

Certain changes to interim status facilities are anticipated by the hazardous waste regulations. It is up to the LDEQ to evaluate each proposed change and determine whether or not these changes are acceptable and meet applicable regulatory standards.

The fact that a facility pre-existed the regulations and/or was "grandfathered in" has no impact on what future changes might take place at the facility. Hazardous waste treatment, storage or disposal facilities often undergo changes to keep up with waste management trends and technology. However, all such changes are governed by the hazardous waste regulations and subject to Department approval.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

000653

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 14

REFERENCE: January 29, 1996 correspondence from Marvin L. Harger.

ISSUE: Title deed for CWMI.

COMMENT: The Settlement Agreement states in Section 1. "Chemical Waste is the owner and operator of a hazardous waste treatment, storage and disposal facility at John Brannon Road, Carlyss, Calcasieu Parish, Louisiana ("the Facility"). This aptly demonstrates the acceptance by DEQ of anything that CWMI states to DEQ. CWMI stated in a notarized affidavit dated 19 October, 1983, to the Clerk of Court in the parish of East Baton Rouge, State of Louisiana, that "Chemical Waste Management, Inc., a foreign corporation authorized to do and doing business in the State of Louisiana appearing herein through its duly authorized agent and attorney, who after being duly sworn, did acknowledge and declare that:

"Chemical Waste Management is the owner of a certain tract or parcel of ground described as follows: A certain tract or parcel of ground containing approximately 280 acres, located in Sections 8 and 9 of Township 11 South, Range 10 West, located in the Parish of Calcasieu, State of Louisiana and which said tract is divided by John Brannon so that 160 acres is west of John Brannon Road and 120 acres is east of John Brannon Road."

DEQ could (and should) check the land records in Calcasieu Parish to determine whether or not the above affidavit is true.

LDEQ RESPONSE: On March 15, 1996, members of the LDEQ's Hazardous Waste Division visited the Calcasieu Parish Clerk of Court's office to perform a title deed search on the CWMI property. The only significant difference noted between the affidavit and the deeds of sale was that the deeds of sale, dated approximately three years earlier than the affidavit, list CWMI as a Delaware corporation rather than a foreign corporation authorized to do business in the State of Louisiana.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

000654

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 15

REFERENCE: January 29, 1996 correspondence from Marvin L. Harger.

ISSUE: The LDEQ should verify all information.

COMMENT: DEQ should verify all of the statements, representations, and data presented by CWMI to the department to assure the accuracy of them.

LDEQ RESPONSE: The LDEQ reviews all permit applications. During this process, the information submitted by the applicant is reviewed for accuracy and technical adequacy. Throughout the application and permitting process, the applicant must sign certifications stating:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment." (LAC 33:V.513)

In addition, Section I of the draft permit, the Preamble, states:

"This permit is based on information submitted in the permit application, and all subsequent submittals, and on the applicant's certification that such information is accurate and that all facilities were or will be constructed and operated as specified in the application."

The above regulation and preamble condition demonstrate the LDEQ's commitment to assuring the accuracy of information submitted. If any applicant knowingly falsifies information, not only would the permit be in jeopardy of being revoked, the responsible party could face fines and imprisonment.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	16
REFERENCE:	The LDEQ must be a responsible agency.
ISSUE:	January 29, 1996 correspondence from Marvin L. Harger.
COMMENT:	DEQ must become a truly responsible agency as required by Louisiana and Federal laws, with public input and public accountability. Otherwise, the agency should simply be done away with by the legislature that created it.
LDEQ RESPONSE:	Authorization for Louisiana to administer its Hazardous Waste Program has been given by the USEPA. In order to maintain this authorization, the LDEQ must remain consistent with the federal program administered by the USEPA, all under that agency's oversight. If the USEPA finds that the LDEQ is acting in a irresponsible manner, the USEPA can revoke the LDEQ's authority. The regulations followed by the LDEQ are the result of promulgation of State regulations which are at least equivalent to, and in some cases more stringent than, those followed by the U.S. EPA. These regulations have evolved over a 13+ year process and are used nationwide in the regulation of hazardous waste facilities.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM: 17

REFERENCE: February 5, 1996 correspondence from LEAN (Louisiana Environmental Action Network).

ISSUE: Use of Practical Quantitation Limits (PQLs) and Method Detection Limits (MDLs) in the permit.

COMMENT: The proposed settlement agreement permit's use of practical quantitation limits for groundwater monitoring of volatile organic compounds is improper.

In Section X of the proposed settlement agreement permit ("proposed permit"), the Groundwater Monitoring section, Practical Quantitation Limits ("PQLs") are listed for each volatile organic indicator parameter in Table 3A. The DEQ indicates that the PQL values listed are based on a report or article by Robert D. Gibbons. We object to the use of the PQLs as listed in this table for several reasons.

1. The DEQ's adoption of the practical quantitation limits listed in Table 3A in place of the method detection limits has no basis in the record.

In the DEQ's original permit issued to CWMI, limits for volatile organics were set as concentration limits and method detection limits ("MDLs"). This was in accord with the regulatory requirements. The Louisiana Administrative Code 33:V.3309 requires that "[t]he administrative authority ... specify in the facility permit concentration limits in the groundwater for hazardous constituents." It also requires that any statistical method used to evaluate groundwater monitoring data "shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment." (LAC 33:V.3315.I.5) Thus the DEQ originally determined that use of MDLs in the statistical procedure would account for data below the limit of detection and would satisfy this regulatory requirement.

In the proposed permit, however, the DEQ has approved a monitoring method which does not use MDLs (although MDL values are superfluously listed in the table) or set concentration limits. The

proposed method uses PQLs instead. Although the use of PQLs is sanctioned in the regulations, the PQLs must meet the regulatory requirements that "Any practical quantitation limit (PQL) approved by the administrative authority ... shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility." (LAC 33:V.3315.I.5)

The record does not reflect that the DEQ has determined that or even considered whether the PQLs listed in Table 3A of the proposed permit are the lowest concentration levels that can be achieved. The absence of any showing of this in the record is particularly suspect when the DEQ originally stated in its brief that MDL is the "acceptable reproducible concentration limit that can be detected by an analytical instrument." (See original brief on behalf of the Louisiana Department of Environmental Quality in the Matter of Chemical Waste Management, Inc., Case No. CA/90/05/16, First Circuit Court of Appeal.) In fact, because the PQL values now listed for volatile organics are higher than the MDL for all but two of the listed volatiles, it would appear on its face that the PQLs are not the "lowest concentration limit that can be reliably achieved."

Thus, we object to the adoption of the listed PQLs absent a showing by the DEQ of how it has now determined that PQLs, and not MDLs, are the lowest concentration that can be reliably achieved.

Although Method Detection Limits, MDLs, are listed in Table 3A of the permit, these are apparently either an artifact of the original permit or simply window dressing because nowhere in the language of the groundwater monitoring section of the permit are these values referred to, nor are they used in the monitoring framework set up in the permit.

LDEQ RESPONSE:

LDEQ has conducted extensive in-house reviews of the statistically derived PQLs which are specified in the proposed Settlement Agreement. A review of the latest literature, EPA Guidance documents, and discussion with numerous experts in the field (including the author of the RCRA regulations pertaining to statistical analysis of groundwater monitoring) indicate that for a facility such as CWMI (*i.e.* a facility at which groundwater monitoring data

consists of a large proportion of nondetects), the proposed approach is one of the few viable approaches for satisfying the statistical analysis requirements under the federal regulations and the Louisiana Hazardous Waste Regulations. Additionally, LDEQ-HWD contracted Tulane University Medical Center, School of Public Health and Tropical Medicine, to perform an independent review of the proposed statistical method. The results of this review were taken into consideration during preparation of permit provisions regarding groundwater monitoring. Documentation of the rationale for the proposed statistical methods and compliance with applicable regulations has been submitted to LDEQ by CWMI pursuant to settlement negotiations.

The Method Detection Limits listed in Table 3A of the permit are for informational purposes only. The Method Detection Limit, as defined in "Test Methods for Evaluating Solid Waste" (USEPA SW-846, Third Edition, Revision 1), is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample **in a given matrix containing the analyte** (emphasis added). The Practical Quantitation Limit (PQL) is defined as the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For a groundwater matrix, the PQL is generally 5 to 10 times the MDL.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

000659

ITEM: 18

REFERENCE: February 5, 1996 correspondence from LEAN (Louisiana Environmental Action Network).

ISSUE: Analytical requirements for groundwater monitoring have no basis in the record.

COMMENT: The proposed settlement agreement permit's use of practical quantitation limits for groundwater monitoring of volatile organic compounds is improper.

In Section X of the proposed settlement agreement permit ("proposed permit"), the Groundwater Monitoring section, Practical Quantitation Limits ("PQLs") are listed for each volatile organic indicator parameter in Table 3A. The DEQ indicates that the PQL values listed are based on a report or article by Robert D. Gibbons. We object to the use of the PQLs as listed in this table for several reasons.

2. The DEQ's adoption of the "Robert D. Gibbons" statistical method is unsupported in the record.

In the proposed permit, a determination that contaminants are present in the groundwater is only made if the groundwater sample yields a result greater than the PQL listed. For volatile organics, these PQL values were statistically determined based on a method by Robert D. Gibbons.

The regulations provide several types of statistical methods which can be used to evaluate groundwater data. (LAC 33:V.3315.H). However, the regulations mandate that "[u]se of any of the following statistical methods must be protective of human health and the environment and must comply with the performance standards outlined in LAC 33:V.3315.I."

The DEQ has provided no basis in the record to conclude that the Gibbons method is protective of human health and the environment or complies with the required performance standards. Several issues are of concern regarding the Gibbons method.

First, nowhere in the permit or in any attachment to the permit is the Gibbons statistical method reproduced, explained, summarized, or discussed. Second, this method appears not to be a widely used or accepted industry standard, unlike the Student t-test method recommended in the original permit. In fact, the cite provided in the permit to the authority for this method is not any scientific journal or well-known industry literature. The citation is so cryptic as to make it impossible to locate this article, speech, or whatever form this method was memorialized in. Third, it was a method developed by Robert D. Gibbons that was originally proposed by CWMI and rejected by the DEQ. If this is in fact the same method, the agency has given no reasons why its original valid objections to this method, including its reliance on comparison of a sample to only the previous sample no longer exist. If in fact this method is based on comparing the sample taken to only the previous sample, then it may violate the regulatory requirement that "these method(s) must compare data collected at the compliance point(s) to the background groundwater quality data." (LAC 33:V.3317.F.1.) As envisioned by the regulations, background groundwater quality data would be that which exists originally.

Thus, the DEQ must provide a basis for approving a statistical method which it originally rejected as not being adequate protection to human health and the environment.

LDEQ RESPONSE:

The scientific community, as well as the USEPA, has long recognized that statistical tests, such as the Student's t-test, which are based on the assumption that data is normally distributed, may not be applicable to many groundwater monitoring applications. Indeed, the USEPA has revised its regulations to allow for more flexibility in the selection of statistical methods to account for this fact. Each groundwater monitoring application is characterized by a unique set of conditions which must be taken into account before selection of an appropriate statistical method. LDEQ has considered such site-specific conditions, as well as the most up-to-date scientific publications and consultation with professional statisticians, in proposing the terms of this Settlement Agreement.

The methodology by which the statistically derived PQLs are developed is well documented. In his book "Statistical Methods for

Groundwater Monitoring", Robert Gibbons provides detailed discussion of the proposed method, along with an extensive bibliography of technical and scientific references. Additionally, as stated in the response to Comment No. 18 above, documentation of the rationale for the proposed statistical methods and compliance with applicable regulations has been submitted to LDEQ by CWMI pursuant to settlement negotiations.

ACTION: The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

ITEM:	19
REFERENCE:	February 5, 1996 correspondence from LEAN (Louisiana Environmental Action Network).
ISSUE:	Background groundwater variables should not be made variable.
COMMENT:	Background variables should not be made variable. In the groundwater section of the proposed permit, page 55, the permit provides that "background values and PQLs for indicator parameters ... will be updated with additional data as it becomes available." This is improper. A background value is immutable and is the value that exists originally at the site.
LDEQ RESPONSE:	Background values are not "immutable values that exist originally at the site". Background groundwater parameters are subject to temporal variation which may be caused by natural and/or anthropogenic processes unrelated to operations at the CWMI facility. In order to account for these variations and to characterize background water quality at the time of sampling, groundwater quality at the upgradient background wells is compared to groundwater quality at the downgradient point of compliance wells. The results of groundwater monitoring from both the upgradient wells and the point of compliance wells must be evaluated in order make a determination as to whether potential changes in water quality at the point of compliance are the result of a release associated with the CWMI facility.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

CHEMICAL WASTE MANAGEMENT INC.
LAD 000 777 201
CARLYSS, LOUISIANA

000663

ITEM:	20
REFERENCE:	February 5, 1996 correspondence from LEAN (Louisiana Environmental Action Network).
ISSUE:	The DEQ should keep the original approach to the groundwater monitoring requirements.
COMMENT:	We object to the groundwater monitoring section of the permit as it currently existed and request that the DEQ adopt its original approach to the above-stated problems.
LDEQ RESPONSE:	Findings of fact, conclusions of law, and recommendations which were made by the hearing officer in connection with the September 1988 adjudicatory hearing cite numerous provisions of the groundwater protection section of the appealed Operating Permit that are without technical or legal basis. Based on these findings of fact, conclusions of law, and recommendations, appealed groundwater issues were remanded to LDEQ for settlement through negotiations with CWMI. The groundwater protection provisions of this settlement agreement reflect these negotiations, are technically sound, and are in full compliance with the Louisiana Hazardous Waste Regulations.
ACTION:	The provisions of the proposed Settlement Agreement will not be revised.

RESPONSIVENESS SUMMARY

APPENDIX 1

LAND TITLE DEEDS AND AFFIDAVIT

37 15

CONVEYANCE

000665

6.75 chg.

OFFICE [illegible] COURT

CASH SALE

NOV [illegible] '80

CALCASIEU PARISH LOUISIANA

MALCOLM PAUL RICHARD, ET UX	:	UNITED STATES OF AMERICA
TO	:	STATE OF LOUISIANA
CHEMICAL WASTE MANAGEMENT, INC.	:	PARISH OF CALCASIEU

BEFORE US, the undersigned authorities, in and for the states, counties and/or parishes hereinafter shown, and on the dates indicated, personally came and appeared:

MALCOLM PAUL RICHARD, of lawful age and a resident of the Parish of Calcasieu, State of Louisiana, married to and residing with Joan Reich Richard, born Reich, and the said

JOAN REICH RICHARD, born Reich,

herein called SELLERS, residents of the Parish and State aforesaid, whose permanent mailing address is declared to be Route 2, Box 1935, Sulphur, Louisiana 70663, who declared that for the price of SEVENTY THOUSAND AND NO/100 ($70,000.00) DOLLARS cash, receipt of which is acknowledged, SELLERS hereby sell and deliver with full warranty of title and subrogation to all rights and actions of warranty SELLERS may have, unto:

CHEMICAL WASTE MANAGEMENT, INC., a Delaware corporation, authorized to do business in the Parish of Calcasieu, State of Louisiana, herein represented by its duly authorized Senior Vice-President, Lawrence Beck

herein called BUYER,

whose permanent mailing address is declared to be 900 Jorie Boulevard, Oak Brook, Illinois, 60521 , the following described property the possession and delivery of which BUYER acknowledges, said property being situated in the Parish of Calcasieu, State of Louisiana, to-wit:

Commencing at a point 656.42 feet South of the Northeast Corner of the Northeast Quarter of the Northeast Quarter (NE¼ of NE¼) of Section 5, Township 11 South, Range 10 West, thence South 163.87 feet, thence West 1326.9 feet, thence North 163.87 feet, thence East 1326.9 feet to the point of commencement, together with all additions and improvements situated thereon.

1625328

Mortgage Index

Taxes for the year 1979 are paid. Taxes for the year 1980 are assumed by the Buyer.

All parties signing the within instrument have declared themselves to be of full legal capacity.

All agreements and stipulations herein, and all the obligations herein assumed shall inure to the benefit of and be binding upon the heirs, successors, and assigns of the respective parties, and the Buyer, its heirs and assigns shall have and hold the described property in full ownership forever.

The certificate of mortgages by Article 3364 of the Revised Civil Code of Louisiana is dispensed with by the parties.

THUS DONE AND SIGNED in the City of Lake Charles, Parish of Calcasieu, State of Louisiana, in the presence of me, Notary, and the following competent witnesses who have signed in the presence of the parties and me, Notary, on this 24th day of November, 1980, after reading of the whole.

WITNESSES:

Patricia A. Louaillier

Patricia A. Louaillier

Malcolm Paul Richard

MALCOLM PAUL RICHARD

Cynthia Ann Benoit

Cynthia Ann Benoit

Joan Reich Richard

JOAN REICH RICHARD

Henry R. Liles

NOTARY PUBLIC
HENRY R. LILES

THUS DONE AND SIGNED in the City of Lockport, County of Will, State of Illinois, in the presence of me, Notary, and the following competent witnesses who have signed in the presence of the parties and me, Notary, on this 12th day of November, 1980, after reading of the whole.

WITNESSES:

CHEMICAL WASTE MANAGEMENT, INC.

BY: Lawrence Beck

LAWRENCE BECK, Senior Vice-President

Yvonne A. Blood

Judith L. VanNess

NOTARY PUBLIC

MY COMMISSION EXPIRES: 12/19/83 (SEAL)

000667

CHEMICAL WASTE MANAGEMENT, INC.

RESOLUTION AUTHORIZING PURCHASE OF REAL ESTATE

Upon motion duly made, seconded and adopted,

IT WAS RESOLVED THAT: Lawrence Beck, Senior Vice-President of the corporation, be and he is hereby authorized to purchase the following described immovable property from Malcolm Paul Richard and Joan Reich Richard, for the total purchase price of $70,000.00, for and on behalf of this corporation, said property being situated in the Parish of Calcasieu, State of Louisiana, to-wit:

> Commencing at a point 656.42 feet South of the Northeast Corner of the Northeast Quarter of the Northeast Quarter (NE¼ of NE¼) of Section 5, Township 11 South, Range 10 West, thence South 163.87 feet, thence West 1326.9 feet, thence North 163.87 feet, thence East 1326.9 feet to the point of commencement, together with all additions and improvements situated thereon.

The said Lawrence Beck, the Senior Vice-President of the corporation, be and he is hereby specially authorized and empowered to make, sign and execute for and on behalf of this corporation any and all acts and instruments of writing covering said transactions; to incur and pay all expenses necessary and requisite in the premises, and to do and perform all and every other act, matter and thing whatsoever as shall or may be requisite and necessary in the consummation thereof.

* * * * * * * * * * * * *

I HEREBY CERTIFY that the above and foregoing resolution is a true and correct extract copy of the minutes of a meeting of the Board of Directors of Chemical Waste Management, Inc., duly called and convened at the domicile of this corporation, on the 10TH day of NOVEMBER, 1980, where at a quorum was present.

Oak Brook, Illinois, on this 18th day of November, 1980.

Frank R. Kohl
ASST. SECRETARY

CONVEYANCE

OFFICE OF CLERK OF COURT

CASH SALE NOV 26 2 46 PM '90

CALCASIEU PARISH LOUISIANA

WILSON ABSHIRE, JR., ET UX	:	UNITED STATES OF AMERICA
TO	:	STATE OF LOUISIANA
CHEMICAL WASTE MANAGEMENT, INC.	:	PARISH OF CALCASIEU

BEFORE US, the undersigned authorities, in and for the states, counties and/or parishes hereinafter shown, and on the dates indicated, personally came and appeared:

WILSON ABSHIRE, JR., of lawful age and a resident of the Parish of Calcasieu, State of Louisiana, married to and residing with Ethlyn Richard Abshire, born Richard, and the said

ETHLYN RICHARD ABSHIRE, born Richard,

herein called SELLERS, residents of and domiciled in Sulphur, the Parish and State aforesaid, whose permanent mailing address is declared to be Route 2, Box 1940, Sulphur, Louisiana, 70663, who declared that for the price of FIFTY THOUSAND AND NO/100 ($50,000.00) DOLLARS cash, receipt of which is acknowledged, SELLERS hereby sell and deliver with full warranty of title and subrogation to all rights and actions of warranty SELLERS may have, unto:

CHEMICAL WASTE MANAGEMENT, INC., a Delaware corporation, authorized to do business in the Parish of Calcasieu, State of Louisiana, herein represented by its duly authorized Senior Vice-President, Lawrence Beck

herein called BUYER,

whose permanent mailing address is declared to be 900 Jorie Boulevard, Oak Brook, Illinois, 60521 , the following described property the possession and delivery of which BUYER acknowledges, said property being situated in the Parish of Calcasieu, State of Louisiana, to-wit:

Commencing at a point 820.29 feet South of the Northeast Corner of the Northeast Quarter of the Northeast Quarter (NE¼ of NE¼) of Section 5, Township 11 South, Range 10 West, thence West 1326.9 feet, thence South 163.87 feet, thence East 1326.9 feet, thence North 163.87 feet to the point of commencement, together with all additions and improvements situated thereon.

Book 1630 Page 257

Taxes for the year 1979 are paid. Taxes for the year 1980 are assumed by the buyer.

All parties signing the within instrument have declared themselves to be of full legal capacity.

All agreements and stipulations herein, and all the obligations herein assumed shall inure to the benefit of and be binding upon the heirs, successors, and assigns of the respective parties, and the Buyer, its heirs and assigns shall have and hold the described property in full ownership forever.

The certificate of mortgages by Article 3364 of the Revised Civil Code of Louisiana is dispensed with by the parties.

THUS DONE AND SIGNED in the City of Lake Charles, Parish of Calcasieu, State of Louisiana, in the presence of me, Notary, and the following competent witnesses who have signed in the presence of the parties and me, Notary, on this 24th day of November, 1980, after reading of the whole.

WITNESSES:

Patricia A. Louaillier
Patricia A. Louaillier

Wilson Abshire Jr
WILSON ABSHIRE, JR.

Cynthia Ann Benoit
Cynthia Ann Benoit

Ethlyn Richard Abshire
ETHLYN RICHARD ABSHIRE

Henry R. Liles
NOTARY PUBLIC
HENRY R. LILES

THUS DONE AND SIGNED in the City of Lockport, County of Will, State of Illinois, in the presence of me, Notary, and the following competent witnesses who have signed in the presence of the parties and me, Notary, on this 12th day of November, 1980, after reading of the whole.

WITNESSES:

CHEMICAL WASTE MANAGEMENT, INC.

BY: Lawrence Beck
LAWRENCE BECK, Senior Vice-President

Yvonne R. Bland

Judith L. VanDeas
NOTARY PUBLIC

MY COMMISSION EXPIRES: 12/19/83 (SEAL)

000670

CHEMICAL WASTE MANAGEMENT, INC.

RESOLUTION AUTHORIZING PURCHASE OF REAL ESTATE

Upon motion duly made, seconded and adopted,

IT WAS RESOLVED THAT: Lawrence Beck, Senior Vice-President of the corporation, be and he is hereby authorized to purchase the following described immovable property from Wilson Abshire, Jr. and Ethlyn Richard Abshire, for the total purchase price of $50,000.00, for and on behalf of this corporation, said property being situated in the Parish of Calcasieu, State of Louisiana, to-wit:

> Commencing at a point 820.29 feet South of the Northeast Corner of the Northeast Quarter of the Northeast Quarter (NE¼ of NE¼) of Section 5, Township 11 South, Range 10 West, thence West 1326.9 feet, thence South 163.87 feet, thence East 1326.9 feet, thence North 163.87 feet to the point of commencement, together with all additions and improvements situated thereon.

The said Lawrence Beck, the Senior Vice-President of the corporation, be and he is hereby specially authorized and empowered to make, sign and execute for and on behalf of this corporation any and all acts and instruments of writing covering said transactions; to incur and pay all expenses necessary and requisite in the premises, and to do and perform all and every other act, matter and thing whatsoever as shall or may be requisite and necessary in the consummation thereof.

* * * * * * * * * * * * * * *

I HEREBY CERTIFY that the above and foregoing resolution is a true and correct extract copy of the minutes of a meeting of the Board of Directors of Chemical Waste Management, Inc., duly called and convened at the domicile of this corporation, on the 10th day of NOVEMBER, 1980, where at a quorum was present.

Oak Brook, Illinois, on this 18th day of November, 1980.

ASST. SECRETARY

000671

Schwab & Walter

Attorneys at Law

John Schwab
Gerald L. Walter, Jr.

Athena B. Piedrahita
William E. Hodgkins

10636 Linkwood Court
Baton Rouge, Louisiana 70810
Telephone (504) 767-1460

October 24, 1983

Mr. Donald B. Howard
Department of Natural Resources
Hazardous Waste Division
P. O. Box 44066
Baton Rouge, Louisiana 70804

Mr. George Eldridge
Legal Division
Department of Natural Resources
P. O. Box 44066
Baton Rouge, Louisiana 70804

Gentlemen:

For your files, we are enclosing herewith a copy of the affidavit prepared and filed in accordance with Section 13.10 of the Hazardous Waste Management Plan Rules and Regulations. The affidavit was filed for record on the 19th day of October, 1983 and bears file number 1774865 and was recorded in conveyance record number 1772 page 87 of the records of the Clerk and Recorder for the Parish of Calcasieu, State of Louisiana. Also enclosed is a copy of the certificate of the Clerk concerning the recordation.

As discussed with both of you and with Mr. Winston Day, it would appear that an amendment to the Hazardous Waste Management Plan is in order since the notice requirement contemplated by Section 13.10 would occur at closure, not during the operating life of the facility.

With warm personal regards, we remain,

Very truly yours,

SCHWAB & WALTER

GERALD L. WALTER, JR.

GLW,jr:dc

Enclosures

cc: Ben Haney
William V. Walls
Norh Bolda
Sheri Swibel

STATE OF LOUISIANA | FOURTEENTH JUDICIAL DISTRICT
PARISH OF CALCASIEU | OFFICE OF THE CLERK OF COURT

I HEREBY CERTIFY, That the foregoing is a true and correct copy of the original

AFFIDAVIT

filed for record in this office OCT. 19, 19 83, bearing File No. 1774865, and duly recorded on OCT. 20, 19 83, in Book 1772 of CONVEYANCES on page 87, et seq.

IN TESTIMONY WHEREOF, witness my official signature and seal of office at Lake Charles, Louisiana, on this the 20th day of OCT., A.D. 19 83

ACTON HILLEBRANDT, CLERK OF COURT

By Mona Fontenot
Deputy Clerk of Court

PORT NO.—38

000673

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE AFFIDAVIT

BEFORE ME, a Notary Public in and for the Parish of East Baton Rouge, State of Louisiana, personally came and appeared:

> Chemical Waste Management, Inc., a foreign corporation authorized to do and doing business in the State of Louisiana appearing herein through its duly authorized agent and attorney, who after being duly sworn, did acknowledge and declare that:

Chemical Waste Management is the owner of a certain tract or parcel of ground described as follows:

> A certain tract or parcel of ground containing approximately 280 acres, located in Sections 8 and 9 of Township 11 South, Range 10 West, located in the Parish of Calcasieu, State of Louisiana and which said tract is divided by John Brannon Road so that 160 acres is west of John Brannon Road and 120 acres is east of John Brannon Road.

Chemical Waste Management, Inc., by this instrument, notifies any potential purchaser of the above described property that:

1. The foregoing property may be used to manage hazardous waste.

2. The aforesaid property may be subject to certain post-closure care and use requirements if used to manage hazardous waste. [Section 13.7 of the Hazardous Waste Managment Plan Rules and Regulations of the State of Louisiana adopted July 20, 1983]

3. For any waste which may be disposed of upon said property an operational record of the type, location and quantity of hazardous waste disposed of within each cell or area of the facility is maintained at the facility.

4. Within the delays specified following closure of the facility, certain requirements of the hazardous waste management plan may be applicable to the property if the property is used to manage hazardous waste in accordance with the said Hazardous Waste Management Plan.

The foregoing affidavit has been placed in the Conveyance Records of the Parish of Calcasieu in accordance with Section 5.3.4 of the Hazardous Waste Management Plan Rules and Regulations of the State of Louisiana dated July 20, 1983.

CHEMICAL WASTE MANAGEMENT, INC.

By: _____
Attorney

SWORN TO AND SUBSCRIBED before me this 18th day of October, 1983.

_____
NOTARY PUBLIC